THE ANNALS OF THE SCOTTISH SOCIETY OF ANAESTHETISTS

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75 years

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SCOTTISH SOCIETY OF ANAESTHETISTS

COUNCIL FOR 1989-90

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REGIONAL REPRESENTATIVES

		Retires
Aberdeen	Dr.J.D.McKenzie	1990
Dundee	Dr.A.Shearer	1991
Edinburgh	Dr.G.M.Carmichael	1990
	Dr.J.McClure	1991
Glasgow	Dr.B.Maule	1990
	Dr.P.Wilson	1992
Inverness and North	Dr.S.White	1992

PROGRAMME FOR 1990

Registrar's Prize: Entries to be submitted to the Secretary by 28th February, 1990
Annual General Meeting: Peebles Hydro Hotel, 20th-22nd April 1990
Registrars' Meeting: Edinburgh, 25th May 1990
Scientific Meeting and Gillies Memorial Lecture: Dundee, 23rd November 1990
Golf Outing: Royal Aberdeen G.C., June 1990

PRESIDENT'S NEWSLETTER

This year, our Society, the oldest national Anaesthetic Society in the world, celebrates the 75th anniversary of its foundation. This was recognised by the History of Anaesthesia Society who invited us to participate in a joint meeting in Edinburgh this summer. The meeting, organised by Tony Wildsmith in his customary exemplary manner, was excellent. One of the many speakers was Dr.A.Raffan, a past President of our Society, who addressed the meeting on "The History of the Scottish Society of Anaesthetists". His paper is to be found in this special Anniversary issue of this Newsletter - now and henceforth to be known as the Annals of the Scottish Society of Anaesthetists. Dr John Murray, our editor, has gone to great lengths to produce this special edition, marking this milestone in the Society's history, and we are greatly appreciative of his efforts.

We are currently being swept along by winds of change which seem to be blowing on many different fronts. In anaesthetic practice, improved standards of patient safety, born out of the application of more intensive monitoring of the anaesthetised patient, is welcome. The prospect of properly conducted audit providing, for the first time in many centres, information about anaesthetic practice in general and it's effect on postoperative morbidity and mortality, must also be welcome. We are less happy with other changes of a more organisational or political nature because we are uncertain where they will lead us. "Achieving a Balance" we all accept as being necessary. One of the tenets of the plan, however, is to secure this balance by the reintroduction of the permanent subconsultant grade under a slightly different guise from that pertaining in the past - but no less unsatisfactory. While numbers in this grade are to be strictly limited, at least initially, this may not hold good in the future, particularly if the most radical change of all comes to pass - the self-governing hospital. In this setting, our specialty will be particularly vulnerable. The main aim of hospital managers will be to provide an anaesthetic service which is as cheap as possible. I have heard on very good authority that the manager of a prestigious London teaching hospital, previously a radiologist, has suggested that anaesthetics be given by nurse anaesthetists! Although I am sure we will be able to resist this and other proposals which might diminish our status, nevertheless I fear that in the eyes of managers there might be a tendency for ourselves to be looked at, as of old , as "gas men" with our role being restricted to anaesthetising patients. Additionally, if we have to enter into new contracts with locally opted out hospitals, we will have to be careful not to be divided and I would hope that terms and conditions would be firmly based on national guidelines proposed by the Association of Anaesthetists and the College, particularly with regard to teaching and training of junior staff.

Our Society too must have some say in what happens to the specialty in Scotland. Although it has always had a political role to play, this has been fairly low key and generally confined to specific issues pursued on behalf of the Society by an individual or individuals. Whether or not this role should be expanded is up to the Scottish anaesthetist. Certainly at the A.G.M. the membership gave overwhelming support to the notion that the Society would become an official advice-giving body to the S.H.H.D., through the N.M.C.C., in place of the disbanded Anaesthetic Subcommittee of the N.M.C.C. To date, however, although the indications are that this will be so, this is still to be confirmed.

It was in the expectation that the Society would be asked to give advice and comment on important issues that I felt it fitting that it should be involved in the controversy as to whether or not it is appropriate to test patients coming to surgery for antibodies to the anaesthetic agents thiopentone, suxamethonium and alcuronium. As a first step it is necessary to establish the incidence of serious allergic reactions in Scotland as a whole retrospectively over the past five years, and prospectively, and of course more accurately, over this coming year. I am greatly indebted to members of Council for their help in collecting this information from the areas they represent. Trials on R.A.S.T. ongoing in Aberdeen and Edinburgh should provide answers without the need to go "multicentre".

The Scottish Society, with or without a major political role, continues to and will continue to do what it is very good at - arranging for the presentation of papers of educational interest at its three annual meetings, and fostering friendship and good fellowship among Scottish anaesthetists through social contact at these meetings. The Registrars' Meeting in Aberdeen and the Scientific Meeting in Glasgow, organised by John McKenzie and Brian Maule respectively, were by common concensus quite excellent. I would like to congratulate both on behalf of the Society on their organisational skills, and to thank them along with the speakers for their hard work and dedication ensuring success.

Sadly, I have to record the deaths this year of two well known and respected anaesthetists who in different ways contributed much to the specialty - Professor James Robertson of Edinburgh and Dr.Lawson Davidson of Aberdeen. Both were dedicated anaesthetists, both staunch supporters of the Society and both past Presidents. Our sympathy goes out to their wives and families.

Finally, I have to pay tribute to those individuals who devote so much of their time without complaint to managing the affairs of the Society as well as ensuring that the Presidential load is as light as possible. I refer, of course, to our Secretary, Dr. Peter Wallace, and our Treasurer, Dr. Douglas McLaren.

EDITORIAL

Several changes mark this Anniversary edition of this publication. Most obvious will be the change of title from "Newsletter" to " Annals of the Scottish Society of Anaesthetists". The Newsletter has developed steadily from its beginnings in 1960 and we acknowledge again the debt we owe to Dr. Calum Shaw for his foresight and energy as the first editor from 1960 to 1967. The new title is intended to reflect this progress and also the expectation of continued development towards and beyond the year 2000.

Some of the content of this copy takes a long look back as the joint meeting between the History of Anaesthesia Society and the Scottish Society is reported. This provides a fascinating insight into some of the earlier days of the specialty throughout Scotland and it is hoped that this will be a source of interest to present and future generations of Scottish anaesthetists. I am grateful to all the participants at the meeting who have kindly permitted abstracts of their talks to be printed, and particularly to Dr.A.W.Raffan for permission to reproduce in full his masterly account of the History of the Scottish Society of Anaesthetists.

It is a pleasure to record my thanks to all the other contributors also, but I am especially grateful to Dr.W.R.Macrae and Dr.A.Shearer who supplied their contributions on floppy disc which avoided the need for further typing! The computer continues to function flawlessly and the minor incompatibility problem encountered last year has been solved so that this edition should not be delayed.

ANNUAL GENERAL MEETING

The Annual General Meeting took place in Peebles Hydro from the 21st to 23rd April. This was the fifth year that the Society had visited the Hotel and in recognition of this, and in honour of the 75th Anniversary, the Hotel generously provided the Champagne Reception prior to the Annual Dinner on Saturday evening. The cocktails were obviously painstakingly prepared with each cocktail having "75" piped in chocolate on a slice of orange, and this splendid gesture was much appreciated by members of the Society. At the Reception the President, Dr. Greg Imray, presented Mr. Pieter van Dyke, the Manager of Peebles Hydro, with an engraved plate commemorating the 75th Anniversary of the Society, as a token of appreciation for having looked after the Society so well over the years.

The customary golf and fishing events took place on the Friday in pleasant weather. Dr. Ken McKenzie was first in the golf competition, and Dr. Donald Miller won the fishing prize with "Captain" Iain Davidson at the oars.

Evidence that the Society is strong and in good health was clear from the numbers present over the weekend, and from the lively debate at the A.G.M. on Saturday morning.

MEDICINE AND THE NORTH SEA

I consider it a great privilege and honour to have been elected President of this Society, the oldest national Society in the world now entering its 75th year.

Next to standing here about to deliver my Presidential address, the most difficult task I faced was deciding what the subject matter was to be. I thought about talking about intensive care in Aberdeen but rejected that on the grounds that it might be rather boring. I thought about discussing hypercarbia since I was recently involved in a case of accidental CO2 narcosis. The Aberdeen Bon-Accord Lemonade Company succeeded where Henry Hill Hickman failed, but I felt this was, for me, a little too scientific. I considered a dissertation on my life and times as a farmer anaesthetist, but my wife said no. She was worried about some of the more earthy tales I might tell - like hustling round a pig-sty, desperately trying to anaesthetise an unco-operative half grown pig with trilene, so that it could be painlessly castrated. Then on 6th July last year, an event took place, an event in which I had some personal involvement, and one which I felt could be woven into an address entitled "Medicine and the North Sea". I refer of course to the Piper Alpha disaster. I was given a video which more graphically and dramatically depicts what went on that night than any words, so my next problem was to decide how much of it I could afford to leave out. It was rather tempting to let it run its whole length and let it do the address for me. However that would have been cheating. And so in the end I decided to talk for about 20 minutes and show the video for 20 minutes.

Over the years I have visited a number of offshore oil installations. Every time I do I feel that they exist almost at the level of science fiction. They are gigantic technological achievements involving thousands of experts and vast sums of money. The most recent platform to come on stream, the North Alwyn, cost the staggering sum of 1.5 billion pounds. Most production platforms are located between 100 and 150 miles offshore in water varying from 300 to 500 feet deep on the outer limits of our territorial waters.

At the peak of oil production from over 40 production platforms, over 2 million barrels per day, there were over 22,000 men living and working offshore. This figure includes over 1,000 divers.

The oil platform is a dangerous workplace. It is basically an industrial unit with fabrication, welding, electrical and other engineering work going on as well as work on the drilling deck. Fractures are common as are flash burns particularly to eyes. The greatest fear of course is the ever present danger of fire and explosion because of the presence of highly inflammable hydrocarbons.

In order to protect lives and their investment - not necessarily in that order - the oil companies go to great lengths to avoid both. Sensors to detect leaking gas flame and smoke are sited in strategic locations. These are linked to alarm systems, automatic water deluge systems and automatic closure of the wellhead, shutting down production. The living quarters and helideck, an important escape route, are separated as far as possible from high risk areas such as the wellhead, the oil and gas water separation tanks, the gas turbine aeroengines generating electricity, and compressors.

In addition, by law, each oil installation whether exploration drilling rig or production platform, is obliged to have a safety vessel capable of accommodating and providing first aid treatment for all persons on the installation, close at hand. A vessel, usually a converted trawler, most of them a legacy of the Icelandic war, slowly circles its parent rig 24 hours per day, 365 days per year. The tour of duty is 28 days. I can scarcely imagine a more unpleasant, tedious occupation. The Silver Pitt was the support vessel for the Piper Alpha. We have heard criticism of the level of preparedness and expertise of the crew, the failure of an engine in one of the rescue dingies and inadequate scramble nets. However had the vessel not been there, undoubtedly more lives would have been lost. It must be very difficult to remain alert and fully prepared for 25 years in order to respond in perfect order to one incident.

In addition, the oil companies in their major fields provide large, multi-functional semi-submersible vessels. They act as fire-fighting tenders - the Tharos, for example, has water cannons capable of delivering 150 tons per minute - they are a base for diving operations, both air and saturation, and they act as hospital ships with large, well-equipped sick bays, including an operating table, anaesthetic machine and monitoring equipment.

The Tharos was frequently linked to Piper Alpha by a gangway. Had it been in place on the night of the disaster perhaps many more lives would have been saved. On the other hand it too might have been engulfed in flames with additional loss of life. The captain decided it prudent to back off when the paint started to blister and run because of the heat.

These then are local measures taken to provide as safe an environment as possible. What about medical cover? The fact is that the NHS has no legal responsibility for accidents or illness occurring offshore or for giving general health care. Its responsibility does not extend beyond the low tide water mark. The oil companies arrange for the health care of their employees by the provision of rig medics backed by land based general practitioners. The presence of a medic and a sick bay, properly equipped, is a legal responsibility on each installation. The medic must have at least the qualification equivalent to that of a St.John's ambulance man, but most have more. The large oil companies usually recruit them either from the forces or from the NHS and they are usually S.R.N.'s. This is a reasonably satisfactory arrangement.

The hospital service legally plays only a passive receptive role but has always had a professional and moral responsibility for providing support when required. A&E consultants, before the advent of oil, were accustomed to going offshore on lifeboats or by helicopter to render assistance to ill or injured seamen. The advent of oil added a different kind of risk; that of a major disaster - a "blow-out" and fire resulting in multiple casualties. Severe injury to one or two men, especially when there was a problem of extrication, might also demand the presence of the specialist.

Up to 1981 a number of hospital doctors, notably Professor Nelson Norman, then Director of the Institute of Offshore and Environmental Medicine, and Bertie Dundas, along with a number of junior surgeons formed an uninsured volunteer force providing a specialist service. Fortunately the team was only once called out to an incident on a rig. As they flew out so the injured were being flown in - so their mission of mercy was in vain. This team also provided specialist back-up for hyperbaric accidents. Time does not allow me to talk of these as I would like. What I will say is that, fortunately, incidents have been few, probably less than expected. Perhaps this is because of the professionalism of the divers and teams working at saturation. The new, costly National Hyperbaric Centre at Aberdeen has had to deal with more problems generated by careless scuba divers than from the North Sea oil industry. Aberdeen has always had a major hyperbaric interest and it is interesting to note that the first diving accident from the oil industry treated under pressure at Foresterhill provided the stimulus for two junior anaesthetists to pursue an interest in the hyperbaric field. I refer to John Ross, now Senior Lecturer in hyperbaric medicine in Aberdeen, and Henry Manson, now Professor of Anaesthetics, University of Newfoundland.

It was clear that some more formal arrangement for specialist cover was necessary. And so in 1981 UKOOA (The United Kingdom Offshore Operators Association), Grampian Health Board and Aberdeen University agreed to the setting up of a team comprised of 12 consultants, 5 anaesthetists and 7 surgeons. This team was not to be involved in hyperbaric problems since provision here for cover was arranged separately.

The first task for the team was to decide upon equipment. This needed a great deal of attention because there was no point in going offshore to the scene of a major disaster without the materials needed to deal with any situation. The emphasis was necessarily on resuscitation. I will not bore you with fine detail, but cardiovascular support requires i.v. cannulae, infusion sets, ECG monitors and a defibrillator. Respiratory resuscitation requires even more - airways, tubes, laryngoscopes, Laerdal bags, ventilators, cylinders of oxygen and entonox. Drugs include analgesics, inotropes, bronchodilators, steroids, local anaesthetic and anaesthetic agents, ketamine and propofol. Dressings for burns, a surgical abdominal pack and an amputation pack were necessary. Miscellaneous items such as biros, paper and scissors were also necessary.

With the exception of the defibrillator and the pneupac ventilators and air compressors, the latter needed for more prolonged helicopter flights with someone on a ventilator, everything is packed into lightweight aluminium containers. Even although cylinders are made of an aluminium alloy the total weight of all equipment comes to 1/2 ton.

Team training consists of mock call-outs with assembly of equipment which is stored handily near an exit from the A.& E. Department. It is loaded on to an ambulance for transfer to helicopter either at Dyce or the heliport at ARI. Regular trips are made to offshore installations for familiarisation, for talking to rig medics and personnel involved in rig safety, and checking on evacuation procedures. Offshore trips are now more of a public relations exercise. I am not sure how much confidence the arrival of a few rather elderly, rotund, bespectacled doctors inspires in the crews. Winching from helicopter is also practised.

A word about helicopter travel - it really is an unpleasant mode of transportation. It is cramped, poorly lit, and limited for payload. Vibration is excessive as is noise - up to 120 decibels necessitating the wearing of ear protection. Communication by earphones is one way only from the crew or not at all. In addition the power supply is 100 volts DC so that all electrical equipment has to be converted to run off batteries. Vibration makes blood pressure recording inaccurate and mercury sphygmomanometers are banned because of the risk of mercury spillage. It reacts with the aluminium structure of the

helicopter causing structure weakness. Monitoring then is virtually reduced to the mark 1 eyeball variety.

The civilian helicopters e.g. the Super Puma can be readily converted to taking stretcher cases and winching equipment can be quickly installed.

As the years rolled on it seemed as if the team would never be called out until the night of 6th July, 1988 which produced the worst disaster in the history of oil production in the North Sea. At 9.31 that evening, on the Piper Alpha, a piercing sound described by one survivor as "screaming like a banshee" screeched through the rig. Seconds later an explosion ripped the rig in two enveloping it in a ball of flame and smoke. More explosions were to follow as gas under pressure from the gas collecting pipeline upstream and downstream of the platform ignited.

63 crew members survived mostly unscathed or with minor injury but a few had severe burns. 166 died including 2 rescuers. Had it not been for the fact that it was a calm, warm midsummer's night there is no doubt that the death toll would have been much higher. The toll was high because the normal routes and methods of evacuation were excluded because of fire and the loss of all power immediately after the first explosion. Men were trapped in the accommodation module unable to escape because of smoke and heat so intense that it buckled steel beams like plastic and melted hard hats on to the wearers' heads. Those who escaped did so by jumping from heights up to 150 ft. off the rig into the sea and it is perhaps surprising that none of the survivors had significant internal injuries.

At 10.30 p.m. that evening I had just taken my premedication for sleep and was contemplating another when I was summoned to the A.& E. Department with the news that it was likely the team would have to go offshore. The only information available at that time was that the Piper Alpha was on fire and there were casualties. Having assembled all our equipment we awaited the arrival of a Sea King naval search and rescue helicopter. It was on route to the disaster from Pitreavie and was diverted to pick us up. 7 team members had mustered. 3 surgeons stayed behind, one saying - "You won't ever catch me going offshore in an emergency" - ostensibly to tend to incoming casualties, while 4 of us, Bertie Dundas, George Smith and myself along with Alistair Matheson, consultant in A.& E. and team leader, left by helicopter.

The helicopter flight was uneventful but there was a problem of communication. The only way messages could be passed amongst us and with the crew was by the spoken word shouted. There was one moment of consternation when we were told we would be winched down individually to support vessels to tend to the casualties. Fortunately this was a false alarm.

As we approached the scene of the disaster the lurid glow in the sky became more intense until the Piper Alpha, a blazing inferno, came into view. As we slowly circled waiting to land on the Tharos helideck, the scene resembled some of the scenes in the film "Apocalypse Now" with helicopters quartering the sea 50 ft. above the surface with search lights blazing looking for survivors.

Having landed on Tharos, we made our way to the sick bay just below the helideck to join 4 G.P.'s and 4 rig medics who had been there for about one hour before we arrived. Together we treated the casualties. Sadly these were too few. At that time I think there were only eight and there were not many more who needed medical attention thereafter. All were suffering from smoke inhalation to a greater or lesser degree. Nearly all had burns to hands and face, some severe. Those who had jumped considerable heights were bruised about the body and there was a question of internal injury. I.V. infusions were set up and I.V. fluids given and repeated as necessary.

Oxygen and steroids were given to those suffering from smoke inhalation. After that there was not really much to do except to evacuate as soon as helicopter transportation became available.

Priority for evacuation was established and each of us returned with up to three casualties. The journey back again highlighted the potential problem had active medical intervention been necessary.

Back at the A.& E. Department every case was reassessed, X-rayed and placed in appropriate wards - the ITU, orthopaedic or burns unit. Those with burns needed fairly urgent and repeated grafting. Of the local plastic surgeons, one on holiday, was to return, and the other, at a meeting in England, arrived back by helicopter with a team of plastic surgeons. Together and over the next few days they tended to the burns. A number of patients required extensive and repeated grafting - one is still being treated. One badly burned victim unfortunately died. All others recovered at least from the physical trauma. A number do remain emotionally traumatised and I can understand this.

I think it is fair to say that the provision of medical care for the oil offshore industry in this particular disaster was not found wanting. This is a source of satisfaction for those of us involved in providing the care. We have learned a number of lessons and will modify our plans but we sincerely hope such an exercise will not have to be repeated.

The address was then completed by the showing of a video recording of some of the events of that tragic evening taken by a BBC film crew.

I wish to acknowledge material given to me by colleagues Dr.B.Dundas, Dr.G.Smith and Dr.A.Matheson.

SOME ERRORS IN ANAESTHESIA

Cast your minds back a little over 142 years to Christmas Eve, 1846. What was in the news that day? Well, the Irish potato harvest had failed yet again, forcing Robert Peel's Tory government to repeal their protectionist Corn Laws. The Tories had fallen, and after a General Election a new Whig government was in power.

However, had you accosted the occupant of any Hansom cab travelling in the general direction of Clapham, you would have heard a different story. The news that filled the popular press in that particular week was, in its way, of far greater importance than Peel and his Corn Laws.

Because a few days before, on December 21st, Robert Liston, the greatest surgeon of the day, amputated Frederick Churchill's leg at the thigh whilst Churchill was under the influence of ether. The anaesthetist was William Squire, one of Liston's students. Of course, this was not quite the first ether anaesthetic in Great Britain, but it WAS the one that made the news.

The Lancet was quick to publish a note on ether anaesthesia on December 26th, but Dr. Boott's report of Liston's cases, sent to the journal on the same day as the operations, must have arrived too late to print, and had to wait until the New Year. The journal's redoubtable editor, Thomas Wakley, announced that Dr.Bigelow of Boston had discovered a new process for producing insensibility. "Teeth in large numbers have been extracted, and even limbs amputated, without pain. Such a discovery, if it stands the test of time, will be an invaluable boon."

The discovery of anaesthesia was not, in December 1846, hot enough news to justify an editorial. That was reserved for really important things. Wakley was obsessed with his vitriolic campaign against the President of the Royal Society, Lord Manchester, and the activities of mesmerists and homeopathists, whom he regarded as lower than the meanest reptiles. In particular, he reviled poor Henderson, Professor of Medicine at Edinburgh, who had taken an interest in homeopathy and therefore was condemned as a quack and a charlatan.

It seems, from Wakley's mistaken belief that Bigelow discovered anaesthesia, that he had at that stage heard only a rumour of the Boston discovery. The following week he published Bigelow's description of William Morton's first cases. However, Wakley managed to make things even worse by appending a letter from a Mr. James Dorr, dated December 28th:

"Having noticed, in several periodicals and newspapers, reports of two operations performed by Mr. Liston, upon patients under the anodyne influence of inhaled vapour of ether.....I take this earliest opportunity of giving notice, through the medium of your columns, to the medical profession, and to the public in general, that the process for procuring insensibility to pain by the administration of ether to the lungs, employed by Mr. Liston, is patented for England and the colonies, and that no person can use that process, or any similar one, without infringing upon rights legally secured to others..... I have accepted from the American inventors the agency of affairs connected with the English patent."

On January 16th Wakley realised his mistake in allowing the pages of the Lancet to be used in such an unworthy cause, and thundered:

"This question of patent is a stain upon the whole matter. We trust it will be speedily relinquished; and we are assured, that for patentees to attempt to maintain it by law would be most preposterous, and impossible." By then, Dr. Francis Boott had already gone to law, obtaining the opinion of Queen's Council on matters patent. The opinion stated:

"I beg to say that no patent can be valid, giving the patentee the exclusive privilege of administering the vapour of ether to the lungs. I am satisfied you may safely advise your professional friends to continue to use the ether in their operations, without the slightest fear of legal consequences."

Mr Dorr was never heard of again.

British anaesthesia flourished rapidly, and the Lancet made up for lost time with innumerable case reports. Across the Atlantic, however, the great battle over who had discovered Anaesthesia was just warming up.

On the face of it, William Morton was the clear favourite. Ater all, he had performed the first public demonstrations of ether anaesthesia at the Massachussetts General Hospital on October 16th.

1846, and his friend and sponsor, Jacob Bigelow, had published the cases in the Boston Medical and Surgical Journal on November 18th. Bigelow's paper makes fascinating reading:

"The character of the lethargic state which follows this inebriation is peculiar. The patient loses his individuality and awakes after a certain period, either entirely unconscious of what has taken place, or retaining only a faint recollection of it. Severe pain is sometines remembered as being of a dull character; sometimes the operation is supposed by the patient to have been performed upon somebody else."

It is quite evident that Morton induced a state well short of what we would call surgical anaesthesia. Just as well, because he had no idea at all as to how to manage the airway of an unconscious patient sitting in the upright position. If he HAD induced surgical anaesthesia, many of his patients would have surely perished. Perhaps its just as well that ether was discovered before chloroform!

Morton's big mistake was in gravely misjudging his partner, Charles Thomas Jackson. Jackson was a man of many parts - physician, scientist and geologist. He already had something of a reputation for quick footwork, having tried to steal Alexis St. Martin, the French half-breed with the gastric fistula, from physiologist Dr. William Beaumont. Then he claimed that he, not Samuel Morse, had invented Morse code, and that he, not Charles Schonbein, had discovered guncotton.

William Morton had been a pupil of Jackson's and on the basis of Horace Wells' mixed fortunes with nitrous oxide, consulted him as to how the process might be improved. Jackson advised him to use ether instead, and instructed him in its use. On the basis of this advice, Morton successfully etherised Eben Frost for removal of his tooth. In common with many scientific and dental innovators of that time, they secured a patent for their process and ceded its use to Massachussetts General Hospital on payment of a Royalty. They also appointed agents in several other countries; hence the letter from Mr. Dorr to the Lancet. Once people found out about the patent, there was all hell to pay. The surgeons at the Massachussets General refused to use ether at all until the patent was lifted, while others used it and called Morton's bluff. The editor of the "Medical Examiner" wrote:

"The preparation is inhaled from a small two-necked globe, and smells of ether, and is, we have little doubt, an etherial solution of some narcotic substance." He concluded:

"If such things are sanctioned by the profession, there is little need of reform conventions or any other efforts to elevate the professional character of physicians, and quacks will soon constitute the fraternity".

With all this flack flying, Jackson backed away rapidly, giving Morton sole rights to the patent in return for 500 dollars and a 10% commission on all royalties. Morton sued Charles Davis, a Naval Surgeon, claiming infringement of his patent, but lost. He never earned a penny from the patent, and collected nothing from his colleagues but their contempt.

Or so it seemed. Congress announced that the discovery of anaesthesia was so important a boon to mankind that they intended to award the discoverer 100,000 dollars, later raised to 200,000.

That did it. Not only did Morton claim the prize, but so did Jackson, who wrote to all and sundry announcing that he was the discoverer, not Morton. So did Crawford Long, the country practitioner from Georgia who had undoubtedly used ether with complete success in 1842, and so did Horace Wells, who had used nitrous oxide a few weeks later.

Jackson deserved a prize for effrontery. In his "Manual of etherisation", written, so far as we know, without ever having given an anaesthetic, he calumniated anybody and everybody remotely connected with the discovery of anaesthesia. He had, he claimed, inhaled ether vapour himself in February 1842, and lost consciousness:

" The idea flashed into my mind that I had made the discovery I had for so long been in quest of; a means of rendering the nerves of sensation temporarily insensible, so as to admit the performance of a surgical operation on an individual without his suffering pain therefrom."

Note the date, which so conveniently pre-dates Long's first case by just a few days. He claimed to have told many people at the time, and some of them wrote testimonials to substantiate his story. However, even if he had done exactly as he claimed, his achievement was no advance upon that of Humphrey Davy, who had experienced the analgesic effect of nitrous oxide and suggested its use during surgery more than 40 years earlier. Davy is singled out for particular vilification. Jackson quoted Davy's own comment that the pain of toothache was worse after the effects of nirous oxide had worn off.

"Here we have a full refutation, by himself and his master, of that rather hasty statement..... Yet strange as it may appear, there are persons - yes, even scientific and medical gentlemen, both in this country and abroad, who claim the scientific discovery for Davy."

He explains Morton's involvement thus:

"I employed a dentist, a nominal pupil of mine, Mr.W.G.Morton, to make trial of my discovery, in dental surgery, which he consented to do if I would take the entire responsibility."

As for Morton's crucial demonstration at the Mass. General in October 1846, he claimed to have sent Morton to the hospital "as his messenger only, to ask the surgeon Warren to test his agent in a severe surgical operation." He was puzzled and dismayed to find his pupil claiming all the credit! It was, he said, most unfortunate that he himself had had pressing business elsewhere at the time.

It is of more than passing interest that Jackson had spent a good deal of time in the state of Georgia in his capacity as a consultant geologist. Did he somehow get to hear about Long's use of ether, just as he had got wind of other discoveries before their announcement and then claimed the credit? Is that why he could tell Morton exactly how to use ether,

and is that why his knowledge turned out to be worth 500 dollars and a 10% royalty? If all he had really done was to suggest to Morton with no knowledge at all that it would work, he hadn't a leg to stand on.

One person Jackson did NOT libel was Dr.E.R.Smilie of Boston. Indeed, he credited Smilie with having developed an entirely novel anaesthetic method of such efficacy that he had performed many surgical procedures without pain, including the amputation of a lady's arm in 1844. Dr.Smilie administered the vapour of opium by controlled inhalation. He put tincture of opium in a flask, gently warmed, and the fumes were inhaled by the patient through a rubber tube.

In a letter to one John Clough dated January 1846, Smilie described how his patients rapidly became insensitive to painful surgical procedures such as tooth extraction, and some lost consciousness altogether.

In the Boston Medical and Surgical Journal of October 28th, 1846, (note the date) he wrote:

"As it is frequently found desirable to produce insensibility in persons requiring painful operations, I have made use of the solution of opium for that purpose, with excellent success; and from the entire absence of symptoms produced by pain, and those which usually result from the use of opium, I have thought the method of preparation and exhibition invaluable in removing the dread in severe and minor operations of surgery."

Unfortunately, there were three things that Dr. Smilie did not know. First, he did not know that in an opium pipe morphine does not vapourise until the temperature reaches 197 degrees C., but decomposes at 254 degrees, a very narrow temperature range. Thus the opium smoker depends upon close control of the temperature in his pipe bowl to get morphine to vapourise without decomposing.

The second thing that he did not know was that the opium pipe does not deliver morphine to the smoker's alveoli as a vapour. In fact, the cooling smoke from the long stem carries the drug into the smoker's lungs in the form of oily droplets. Since he was only warming his flask, the amount of morphine vapourised would have been vestigial, so that is why his patients did not get morphine poisoning. It's just as well he did not get his vapour hot enough, because if he had, the patients would have got a very large dose very quickly. So why did his patients go to sleep at all?

Well, that's the third thing Dr. Smilie did not know, until he opened his Medical and Surgical Journal three weeks later, and read from the pen of Henry Bigelow that diethyl ether is a most efficient anaesthetic agent. In fact, he had dissolved his opium in diethyl ether, and that is what his patients had been inhaling to such splendid effect.

Smilie was both lucky and unlucky. He was unlucky because he got the right answer by the wrong method, and so was not, as he could so easily have been, the dicoverer of ether anaesthesia. He was lucky not to have blown himself and his patient to kingdom come when he warmed his flask of etheric opium over a naked spirit lamp.

Of course, while Smilie was giving etheric opium to his patients, William Morton, across the city, was giving ether disguised as Letheon to his. Just six days after publication of Smilie's paper, Morton's demonstration at the Massachussets General was reported in an abstract to the American Academy of Arts and Sciences.

Henry Bigelow's account in the Boston Medical and Surgical Journal, widely regarded as the first published description of inhalation anaesthesia, appeared a fortnight later, on November 18th. Therefore it would seem that Dr. Smilie's paper was, in fact, the first published description of inhalation anaesthesia in man.

So why did Jackson, so free with his scorn for everybody else, recognise Smilie's achievement? Well, that's not very difficult to work out, especially when you turn the Journal's pages a little further; to be exact, May 5th, 1847.

Here we find a letter to the Editor, signed by Smilie, explaining that he had just realised that since his was the first published description of ether anaesthesia, he might be considered to have been the true discoverer. He hastened to explain that he had done so unwittingly, thinking that he was administering morphine vapour, so that the accolade due to the discoverer should not be his. Indeed, he publicly renounced any such claim.

NOW we understand; Jackson reserved his vitriol for those he regarded as rivals, and after May 5th Smilie was most definitely not a rival. In fact, of all the Bostonian pioneers of anaesthesia, he alone behaved throughout as a gentleman.

Not everyone in Boston thought ether was such a good idea. Dr. Clay Wallace, a physician, remarked rather prophetically, that since alcohol could cause complete insensibility, so might ether. He concluded:

"Although a person of sound general health may survive it, there is a risk of rupturing the vessels of the brain. Having seen a case of alcohol insensibility, from which the patient never recovered, it will be surprising if we do not hear of a case of insensibility from ether!"

He also suggested that since ether is inflammable, its ignition in the enclosed space of a patient's lungs might lead to fatal detonation. How right he was for all the wrong reasons!

In fact, those early ether anaesthetics were remarkably free from complications, largely because full surgical anaesthesia was not achieved. It is interesting to read the numerous case reports from the journals and popular press, because they give us valuable insights into the nature of ultralight anaesthesia under conditions which we could never produce today. For instance, the Edinburgh Witness newspaper reported a case operated upon by Professor Miller at the Royal Infirmary:

"The patient was a middle-aged Irishman, a navvy, who had sustained a compound fracture of the leg nine weeks before. The fracture had not united, in consequence of the presence of a piece of dead bone; and it became necessary to remove this by a painful

operation. The patient was seated on a table, and the inhalation was applied by means of a very beautiful but simple apparatus, made by Squire of London, and which we understand, had been sent to Professor Miller by Mr. Liston - a very suitable gift from an eminent surgeon to his old pupil. At first little effect was produced; but after some minutes the patient fell backward as if in a swoon. The operator was about to proceed, but the man immediately objected - saying that he was not asleep, and that he trusted that nothing would be done until he WAS asleep. For full twenty minutes more, the inhalation went on; the man confused and talkative, but wide awake, and occasionally expressing, very emphatically, his conviction that "it would not do". At length, however, while still in this wakeful state, the operation was begun. Incisions were made on the shin, and flaps were dissected off, so as to expose the bone beneath. A portion of this was sawn and clipped through, and then the dead bone was removed. Only during clipping of the bone with strong pliers did any sign of feeling escape from the patient, who was busy inhaling all the while, and now and then protesting that it would not do. The operation occupied about ten minutes. After it was over, the professor said to the patient: "I suppose you won't let me operate today?" "No", said the patient, "I must be asleep, we can try it some other time." This plain proof of his utter unconsciousness of the operation having been performed was acknowledged by the spectators in a hearty round of applause."

Incidentally, it seems likely that the inhaler, so kindly given by Liston, was Squires' original device, which he had discarded after the first two cases at Gower Street because it was so inefficient.

Professor Miller's obstetric colleague, James Simpson, first used ether for obstetric deliveries only a month after Liston and Squire's case in London. Later that year he tried chloroform, and found it to be far stronger and easier to administer. He used it first on November 4th 1847, and presented his first paper to the Edinburgh Medico-Chirurgical Society on the 10th. Immediately, this caused uproar, with the fiercely protestant clergy claiming that he was flouting canon law by relieving the pains of childbirth. As we all know, the argument raged until 1853, when Queen Victoria inhaled chloroform for 53 minutes while delivering Prince Leopold, whereupon the critics were forever silenced.

"What had been blasphemy, where was sacrilege now? Who NOW dares call anaesthesia the invention of the devil?"

Simpson's introduction of chloroform was widely emulated, and it was only a matter of weeks before the first fatality occurred. On January 28th, 1848 15 year old Hannah Greener of Winlaton Mill, County Durham, died abruptly during the induction of chloroform anaesthesia by her family doctor, Thomas Meggison. He had used the "Edinburgh method", a technique pioneered by James Simpson by which a folded handkerchief was placed over the patient's face and two teaspoonfuls of liquid chloroform sprinkled on it.

Simpson claimed that his method of administration was foolproof if properly executed, and that she must have died from the inhalation of brandy, which had been administered in a vain attempt to revive her.

Dr.John Snow, by then established as an authority at University College, argued that she must have suffered cardiac failure following the inhalation of strong chloroform vapour, and that the brandy would have done little harm to a patient who was already dead. Now we know that they were both wrong, but Snow was much nearer to the truth than Simpson.

Despite inflammatory and often libellous pamphlets published by both parties, no legal action was brought or even threatened. Quite clearly, the medical negligence industry was not what it is today. Dr.Meggison uttered not a word, kept his head down, and waited for it all to blow over. He obviously belonged to the right defence society.

More generally, when a patient failed to emerge from anaesthesia, the surgeon solemnly pronounced that he had not taken the chloroform well, and that was that. He and his assistants, which included the anaesthetist, had done everything possible to save the patient's life, but the Almighty had decided otherwise. Karma.

That golden age of uncritical enthusiasm lasted for more than a hundred years. Indeed, I have heard Her Majesty's Coroner compliment a doctor in just such a situation, observing that despite the fatal outcome, the patient had been most fortunate to enjoy the services of such an experienced and eminent clinician. Red veins, liver spots and tremor notwithstanding.

How things have changed, because like midwifery in the 16th century, but for quite different reasons, anaesthesia has become a hazardous occupation. Every week we read of judgements against anaesthestists, with a steadily increasing scale of compensation to injured patients or their relatives.

As might be expected, defence subscriptions have risen steeply, with the recent introduction of selective surcharges by the Medical Protection Society. With the recent case of a brain-damaged young banker who had previously earned more than a quarter of a million pounds a year, they might have been expected to rise even further had it not been for the recent announcement that all NHS doctors are to be given Crown Indemnity within the next few months. Whether this will have any limiting effect upon the number of accusations against anaesthetists, remains to be seen. The implications of Crown Indemnity are quite far-reaching, because accused doctors will be represented by Health Authority solicitors, who have much less experience and in all probability much less expertise than our defence societies. In the event that a doctor faces not only vengeful patients but also the possibility of disciplinary action, the Health Authority would seem to be both hare and hound. Not a reassuring prospect, and we will need the defence societies to protect our individual interests more than ever.

As a consequence of some widely publicised cases, our worthy citizen of Clapham no longer accepts the old philosophy that you cannot make omelettes without cracking the odd egg. Such bovine fatalism is

long gone. Indeed, he has a higher expectation of his anaesthetist than any other clinician, because anything less than 100% is unacceptable.

The dissatisfied patient often assumes that in the event of an unwanted anaesthetic outcome such as death or injury, somebody must have been negligent and therefore someone must pay. This invokes the principle of "Res ipsa loquitur", literally, "the thing speaks for itself". It may apply quite well when someone dies of a shotgun wound and you are observed to have pulled the trigger. It might also apply when, as happened very recently, a patient suffers a major hypoxic episode during surgery, but at the inquest it transpires that the anaesthetist had left the patient entirely unattended to go and make himself some coffee. "Res ipsa" does not apply quite so well when the patient suffers neurological damage in the absence of any obvious fault in the anaesthetic technique. Who can be certain that the anaesthetic was responsible; perhaps it would have happened anyway? Nevertheless, the number of potential litigants against anaesthetists has increased alarmingly; so much so that sorting deserving victims from vexatious adventurers has become a growth industry.

So what is changing? Are standards of anaesthetic practice declining steadily, so much so that clinical negligence is becoming commonplace? To a great extent we are victims of our own success, because people regard anaesthesia as simple and easy, so that any failures must be due to incompetence or negligence. Indeed within the space of an hour I could teach anyone, even a lawyer, to give a simple but effective anaesthetic. Within a day he might even pass himself off as an anaesthetist, so long as his previously healthy patients were willing to accept a mortality rate of 5 -10 %. The difference between such a person and a professional anaesthetist is that the professional will accept no mortality at all among such patients, because he knows where all the hazards are, sees them coming a long way off and avoids them like the plague.

We can achieve and sustain such standards by virtue of long training, great experience and constant abrasion by generations of trainees who watch every move and question every decision. Indeed, the recent CEPOD report showed that perioperative deaths due to avoidable anaesthetic factors amount to no more than 1 in 185,000 cases. Good enough odds for any betting man, I would have thought.

Despite Mr. Justice McNair's insistence in Bolam v. Friern that the yardstick of clinical standards should be established by "a competent body of professional opinion", the courts do not always sample that competent body. Instead, they may hear the opinions of great authorities who describe themselves as ordinary working anaesthetists, but in fact are nothing of the kind.

Anaesthesia is not a natural state. We should mark well the learned judge who observed in Drummond Jackson v. the British Medical Journal and others that "for a man to render another insensible goes a long way to killing him". Because the judge was right; it does. He might have added that in the context of modern anaesthesia, failure to MAINTAIN insensibility is an even greater transgression.

What a wonderful euphemism we invented with the term "muscle relaxant". It evokes visions of floating away on a soft and luxurious cloud. How different the reality. If a patient is given thiopentone 250mg and vecuronium 6mg intravenously, he goes happily off to sleep and is intubated and ventilated without incident or distress. But what if the patient is ventilated with room air, and then the operation performed? He recovers consciousness with the first caress of the knife, and lives through every moment of the procedure, unable to move a muscle or indicate his awareness in any way whatever.

What a nightmare of our own making, transcending anything dreamed up by Edgar Allan Poe. The very thought of it is enough to make your skin crawl, reducing his pit and pendulum to the status of minor amusements. It reminds me of poor Juliet, terrified of waking alone in the tomb:

"Alack! Alack! it is not that I
so early waking, what with loathsome smells
and shrieks like mandrakes torn out of the earth
that living mortals, hearing them, run mad".

As one patient put it so movingly in a recent BBC 2 television programme:

"I prayed for death". Small wonder that patients to whom this has happened bear emotional scars which heal slowly if at all.

Under such circumstances, where a patient can recall events, conversation, or worst of all, pain, during anaesthesia and surgery, the facts WOULD appear to speak for themselves. Surely, the anaesthetist MUST have made a mistake, and MUST be regarded as negligent?

In some of the well-documented cases, such as that brought by Mrs. Margaret Ackers (Ackers v. Wigan Health Authority), there can be no doubt at all that the awareness was due to technical errors such as artificially ventilating the patient with ordinary room air or anaesthetic mixtures so weak that they could not possibly be expected to be effective. Notwithstanding Lord Denning's assertion in Whitehouse v. Jordan that every professional man should be permitted to make genuine mistakes without penalty, most errors of this kind would nowadays be judged to be negligent.

But wait a minute. Given that a wide range of modern surgical procedures demand full muscle relaxation, so that the patient is, by necessity, paralysed and artificially ventilated, how DO you determine whether he is awake or asleep?

We rely heavily upon monitoring the responses of the autonomic nervous system to surgical stress. Thus rises in heart rate and blood pressure, together with pale, clammy skin and especially tear formation would indicate that the patient is inadequately anaesthetised , and might be aware. In the absence of such signs, the chances of the patient being wide awake and silently screaming are assumed to be small. However, many of the drugs taken by patients with hypertension and coronary artery disease will modify or even suppress these signs, as will opioids such as morphine and fentanyl. We also rely heavily on

assumptions as to what doses or concentrations of the anaesthetic agent are required to cause unconsciousness.

We desperately need some way of accurately determining the level of sentient activity in individual patients. This is no easy task, because anaesthetic agents do not have an all-or-none effect on brain activity. As the concentration increases, a whole range of sensory perceptions are progressively obtunded.

As those early pioneers demonstrated so convincingly, pain is usually the first to go, followed by other senses. Visual and auditory perception are well-preserved, so that subjects may recollect sound and words but not painful stimuli. Even in quite deep anaesthesia, some sounds and events are perceived and recorded by the brain, even though they cannot be recalled directly.

There are some promising avenues of research, such as real-time analysis of evoked auditory potentials. However, the more we discover, the more complicated it looks. For instance, we know that while anaesthetic agents depress the amplitude of the evoked auditory response, the brain quickly develops tolerance to their effects. Furthermore, surgical stimuli have the opposite effect, and appear to be capable of reversing the depressant effect of light anaesthesia. It seems that quite literally, surgery is an antidote to anaesthesia and that awareness is as much due to surgical stimulation as to poor pharmacology.

Put in a nutshell, there is still no acid test of awareness which works every time. Until there is , the outcome of awareness cases will depend much more upon the quality of advocacy than the skill of the anaesthetist.

In the meantime, I find it hard to applaud the trend towards ultra-light, normocapnic, relaxant anaesthesia, especially when it is coupled with a totally mistaken belief that opioids are anaesthetic agents.

By contrast, halothane is a most reliable agent, and has been used safely in literally millions of cases. However, we all know that in a very small number of patients, possibly 1 in 100,000, it causes fatal liver necrosis by an obscure immune reaction, probably caused by previous exposure.

Several actions for negligence have been brought against anaesthetists on the grounds that repeat exposure to halothane is no longer safe practice, and that after exclusion of other more likely causes, jaundice after halothane speaks for itself. Since none of these cases have been defended, many anaesthetists have reluctantly concluded that the repeated use of halothane is now judged to be indefensible. Instead, they use other drugs which are just as likely, or even more likely to cause life-threatening side-effects, albeit different from those caused by halothane.

Despite Lord Justice Donaldson's reassurances in Sidaway v. the Maudsley, this seems to me to be the thin edge of a particularly odious wedge, by which the yardstick of acceptable practice may not be set by a competent body of professional opinion, but by pragmatic compromises between plaintiffs and the defence societies.

Now you may think I am standing here, trying to pretend that all anaesthetists are saints, and never do anything which falls short of their sacred duty of care, so that everything which goes wrong must be someone's else's fault.

On the contrary, there have been many cases of gross negligence, which I could never attempt to justify, excuse or defend. How can such dreadful events possibly arise? Is it possible that we simply do not train our anaesthetists well enough? Well, look how the system works:

No hospital may train anaesthetists unless it has been inspected and approved for General Professional Training by the College of Anaesthetists. No doctor can be appointed as a Consultant Anaesthetist without obtaining the College's Diploma, followed by a further three years of Higher Professional Training in an approved rotation.

Must I accept that the consultant products of these widely-admired training schemes, arguably the best in the world, are so poorly prepared for professional life that they can let patients die as a result of simple negligence? In the very great majority of cases the answer is "No, they are not." But it is not, by and large, such people that have generated the worst cases.

As the law stands at present, any registered medical or dental practitioner may administer anaesthetics, with no requirement whatever for specialist training beyond what he receives as an undergraduate, and no requirement for continuing education in later years. This laxity has created a small but largely unsuspected body of unsafe clinical practice from which accidents must inevitably emerge so long as it is permitted to survive.

For instance, there are some anaesthetists in this country whose training can only be described as fragmentary. Most of these doctors have failed to progress through the very competitive postgraduate training schemes, but make a living as itinerant locums, often at consultant level. Few patients can be aware that their unsupervised anaesthetist is not a properly trained professional.

It is a continuing scandal that the College criteria for consultant appointments are not always applied to locums, and the occupants of such posts may never have held substantive appointments at that level. My sympathy lies with the doctors concerned, since many of them are clearly unaware of their own limitations. The real negligence lies with the Health Authorities who employ them.

Even worse, many anaesthetics are still administered by general medical and dental practitioners who have never trained at all. This is a sensitive issue, with vested interests resisting change. But change there must be, if we are to make any progress.

Then there are a small number of established anaesthetists who were trained many, many years ago and practice their art the way they have always done. Quite simply, they have failed to keep up with evolving standards. For instance, they see no great need for continuing professional education, despite its widespread availability in all regions of the country. They scorn the use of modern monitoring instruments, claiming that they do not need them, and seem

prepared to take the most appalling risks with their patients' lives.

They see nothing wrong in putting a patient off to sleep and then reading the Daily Telegraph, telephoning their stockbrokers, popping out for their coffee or visiting the comfort station, in the totally mistaken belief that the maintenance phase of anaesthesia can be likened to a cruising aeroplane on autopilot. In fact, Cooper's work has shown that this is the most likely time for preventable mishaps to occur.

If we cannot educate those who see no need for education, then perhaps we should rid ourselves of these pestilent remnants of a bygone age. That, however, is easier said than done. Dismissing a consultant or associate specialist from the N.H.S. is virtually impossible unless he kills someone; even then his Health Authority would be terrified of taking action unless he was caught with a smoking shotgun in his hands. The sooner the terms and conditions of service are changed to allow consultant contracts to be reviewed at regular intervals, the better.

A number of most unfortunate cases have arisen where inexperienced trainees have found themselves in very deep water without satisfactory supervision. In part, this has been because they were unaware of their limitations, but in others they have been left dangerously exposed. In both cases their consultants must accept the weight of responsibility and adjust the workload of their departments until working practices can honestly be said to be safe.

There are many more of us who are slow to appreciate that we live in a changing world, where hospitals are no longer run by doctors and nurses for patients, but by accountants for politicians.

When it is possible to give anaesthetics that are virtually free from risk, and it is, how can a properly trained and caring anaesthetist BRING himself to practise in conditions which he knows to be hazardous? Yet we do, and in acquiescing we conspire with our employers to give substandard clinical care which would be impossible to defend before any jury.

"Tell me, Professor, what kind of accidents do you fear most?"

"Undoubtedly, those involving brain hypoxia. The most likely causes of accidental hypoxia are undetected oesophageal intubation, ventilation with hypoxic gas mixtures and accidental disconnection from the ventilator."

"Fair enough, but surely there are instruments that can measure the inspired oxygen concentration, can tell you most reliably whether you are ventilating the lungs or the stomach, and can give early warning when the blood is no longer properly oxygenated?"

"Indeed there are. When used together, a simple oxygen analyser, a capnometer and a pulse oximeter can do all these things. These devices are simple to use, reliable in operation and readily available".

"Now Professor, in between all your other commitments, did you manage to give any anaesthetics last week?"

"Yes I did. In fact I did three operating lists".

"Do you regard such basic instruments as the oxygen analyser, pulse oximeter and capnometer to be absolutely essential for patient safety when you give anaesthetics for major surgery?"

"Yes I do".

"Were these instruments available on each occasion last week?"

"No, they were available in some theatres but not others".

"Why not, when you've just said that they were essential?"

"Yes I know I did, but despite written warnings my Health Authority has declined to commit sufficient resources to allow proper monitoring in all theatres, and I have no alternative but to do the best I can with what I've got".

"Doesn't your Health Authority realise how expensive that could be in the event of a major anaesthetic accident?"

"Certainly they do; they just hope it won't happen. The managers talk about priorities, as if money spent on refurbishing their offices can be balanced against patients' lives in the operating theatre. We are faced with a dilemma: should we refuse to practise anaesthesia under these third world conditions, and watch patients die for want of surgery, or should we soldier on as best we can, in the hope that nothing goes wrong? Because if it does, we have no possible way of defending ourselves legally, morally or any other way. You know very well what we do; we soldier on".

Actions for negligence will continue until we have more control over who is permitted to practise anaesthesia, until we can restrict the activities of those whom we know to be ineffective, cavalier or downright dangerous, and until our masters in Whitehall recognise that safety and excellence cost money.

Present evidence suggests that such recognition is, to put it bluntly, unlikely. Because the White Paper, despite its deliberate lack of detail, is clearly all about competition between hospitals in order to save money and limit public expenditure, and nothing at all to do with the achievement of excellence. Even the proposals for clinical audit are no more than a belated acceptance of our own, well-established initiatives.

The real danger is this: if more than a handful of teaching hospitals decide to become independent trusts, the existing machinery for training anaesthetists, arguably the best in the world will be destroyed overnight. In that event, the quality of practice would decline inexorably, and our legal friends would have more trade than they could handle. We must use what muscle we have to ensure that this does not happen.

More than three hundred years ago the physician and philosopher John Locke wrote : "All men are liable to error, and most men are, in many points, by passion or interest, under temptation to it".

I hope that when history comes to judge us, we shall fare better than some of those who have gone before. If we have to get things wrong, then let us at least do so with passion, because we care, rather than self interest, that worst of all motives for doing anything.

Examination of Cardio-respiratory Stress during Upper Gastro-intestinal Endoscopy

SUMMARY
A study was performed to assess cardio-respiratory changes induced by sedation and endoscopy in order to identify periods of high risk and to evaluate suitable monitoring techniques for endoscopy.
Twenty patients scheduled to undergo prolonged endoscopic procedures which required deep sedation were studied. Continuous recordings of ECG, pulse and arterial oxygen saturation were estimated and arterial blood pressures recorded at one minute intervals. The study commenced immediately prior to administration of sedatives, continued for the duration of the examination and for one hour following the examination.
Oxygen saturation fell in all patients during the examination to a mean of 82.9%, SEM 2.72, remained below baseline for the duration of the examination and into the recovery period. At the end of the study, 11 patients had not returned to baseline saturation.
Of 20 patients, 16 developed tachycardia during the examination. Ten patients developed ectopic foci which were supra-ventricular, venticular or both in origin. ECG changes resolved during the recovery period.
Statistically significant increases and decreases compared with baseline levels were seen in systolic blood pressure and rate pressure product during the examination.
Significant correlation was found between ST segment depression and hypoxia ($r=0.904$, $p<0.00005$). No correlation was found between ST segment depression and blood pressure, heart rate or pressure product.
Cardio-respiratory monitoring during upper gastro-intestinal endoscopy is recommended. In particular, pulse oximetry offers rapid and reliable assessment of the patient's oxygenation. Regular and frequent assessment of arterial blood pressure and pulse rate is also desirable during the examination.

INTRODUCTION
Concern has recently been expressed regarding monitoring during endoscopy [1]. Studies have demonstrated that hypoxia and arrhythmias occur commonly during upper gastro-intestinal endoscopy. Explanations for hypoxia include hypoventilation secondary to sedative medication, partial obstruction by the endoscope, and possibly ventilation perfusion mismatch due to increased autonomic activity. Cardiac arrhythmia has been associated with periods of hypoxia during endoscopy.
This study was designed to identify cardio-respiratory abnormalities and high risk periods related to endoscopy , to establish the existence of any relationship between measured parameters and finally to advise on clinically useful monitoring for endoscopy.

SUBJECTS AND METHODS
Twenty patients scheduled to undergo prolonged or complex endoscopic procedures were recruited to the study. Written informed consent was obtained for data collection and storage on magnetic media, and the approval of the hospital ethics committee was given. The mean age of the patients was 62.45 years (SEM 3.35) and ranged from 26 to 85 years. The mean weight of the group was 64.55 kg (SEM 4.43) and ranged from 32 to 106 kg.
Seventeen of the group had significant pre-existing medical conditions other than their gastro-intestinal disease. These consisted of ischaemic heart disease (5), cerebro-vascular disease (3), valvular heart disease (1), hepatic or pancreatic disease (4), and respiratory disease (4). The procedures performed were endoscopic retrograde cholangiopancreatography (9), and endoscopy for intended laser therapy (11). The mean duration of the examination was 20.7 minutes (SEM 2.47), and ranged from 4 to 43 minutes.
The study commenced immediately prior to the administration of sedative drugs, continued for the duration of the examination and for the first hour of the recovery period. The mean duration of the study was 80.7 minutes and ranged from 64 to 103 minutes.
Lignocaine 5% was applied to the patient's pharynx using ten doses of 10mg from a metered spray. Sedative drugs were administered intravenously into a fast-running infusion by the operator. Patients were given pethidine 50mg if they were aged under 70 years, or pethidine 25mg if they were older. The seation was then completed with increments of midazolam until the patient's speech became slurred. The mean dose of midazolam was 7.77mg (SEM 0.59) while the individual doses ranged from 2.5mg to 15mg. When the operator was satisfied with the lvel of sedation, the endoscope was introduced.

DATA COLLECTION
Continuous ECG monitoring was undertaken using a two channel frequency modulated recording system (Oxford Medical Medilog II system). The bipolar lead of most significance, namely CS5, was analysed in detail. The positive electrode was the V5 position and the negative electrode was placed in the right infraclavicular fossa. ECG analysis was performed off-line by a computer linked to a Reynolds Pathfinder and provided data concerning heart rate, rhythm, presence and type of ectopic beats, and ST segment amplitude averaged over one minute periods.
Blood pressure was measured using either a Critikon Dinamap or a Datascope Accutorr 2 non-invasive blood pressure monitor at 1 minute intervals. Heart rate and arterial oxygen saturation (SaO_2) were measured continuously by an Ohmeda Biox 3700 pulse oximeter. The blood pressure monitor and the pulse oximeter were both designed to capture data as

they became available and store the measurements together with the time of recording on magnetic disc at one minute intervals. The rate of data acquisition increased to 15 second intervals if the arterial oxygen saturation dropped 5% or more below the patient's baseline recording. During analysis the rate pressure product was calculated for each entry by the computer.

RESULTS

Oxygen saturation fell in all patients following administration of sedatives and introduction of the endoscope. The mean reduction of saturation was from a baseline of 94.4% (SEM 0.55) to a minimum of 82.8% (SEM 2.72, $p<0.01$) which corresponds to an arterial pO2 of approximately 46mm Hg (6.16 kPa). Four patients developed arterial saturations below 80% and two patients became apnoeic requiring a short period of ventilatory support. A rapid and profound drop in saturation to 42% occurred in one of these patients before manual ventilation began, but the saturation recovered rapidly. Overall saturation had recovered to a mean of 91.6% (SEM 0.79) by the end of the examination, a level which is statistically lower than that of the baseline. ($p<0.05$).

The persistence of hypoxaemia was demonstrated beyond the end of the examination. The average minimum SaO2 during the recovery phase was 90.1% (SEM 0.71). This was significantly lower than the saturation at the end of the study (93.9%, SEM 0.54, $p<0.05$). One patient had a minimum saturation of 84% during recovery. The difference between saturations at the beginning and at the end of the study was not significant. However, saturations in eleven of the twenty patients remained below their baseline measurements at the end of the study. The mean time spent with saturations below baseline was 73.5 minutes with a range of 6 to 103 minutes. The mean time spent with saturations 5% or more below baseline was 9.11 minutes and ranged from 1 to 133 minutes.

During endoscopy marked changes in systolic blood pressure and heart rate were found. Significant increases in blood pressure from a mean baseline of 129.6mm Hg (SEM 4.68) to a maximum of 146.2 (SEM 4.75, $p<0.05$) and decreases to a minimum of 93.9 (SEM 5.17, $p<0.01$) were seen. Significant increases in heart rate occurred during the examination from a baseline of 91.5 (SEM 4.47) to a maximum of 118.4 (SEM 5.00, $p<0.01$). Significant increases in rate pressure product from a baseline of 11828 (SEM 695) to a maximum of 15980 (SEM 995, $p<0.01$) and decreases to a minimum of 8645 (SEM 477, $p<0.01$) also occurred during endoscopy.

ECG analysis showed that arrhythmias developed during the examination. Sixteen of the twenty patients developed sinus tachycardia and ten developed supraventricular and/or ventricular ectopic beats. All changes resolved during recovery.

The development of myocardial ischaemia during endoscopy was evaluated by examination of the ST segment depression in the ECG. The mean ST segment amplitude at the baseline was -0.01mV (SEM 0.069) and the mean minimum during endoscopy was -0.06mV (SEM 0.052). Linear regression was performed with data obtained at the lowest ST segment values to examine the relationships between myocardial ischaemia and blood pressure, heart rate, rate pressure product or arterial oxygen saturation. These analyses showed no correlation between ST segment depression and blood pressure ($R=0.161$), heart rate ($R=-0.267$) or rate pressure product ($R=-0.086$). A significant correlation was found however between the maximum ST segment depression and saturation changes ($R=0.904$). Analysis was performed using data from the five minute period immediately preceding maximum ST depression for the patient who developed the largest reduction in arterial SaO2 and showed a significant correlation ($R=0.977$).

DISCUSSION

Studies of morbidity and mortality during endoscopy are sparse considering the enormous numbers of examinations performed but mortality during endoscpy would appear to be low. Palmer and his co-workers reported 5 deaths related to 267,175 gastroscopies [2]. Fletcher reviewed the records of 1800 sigmoidoscopies and reported 3 cases of sudden death during the examination [3]. A third study by Katz reported one death in a series of 1200 gastroscopies [4].

Several studies have examined cardiovascular and respiratory changes resulting from sedation and insertion of an endoscope. Electrocardiographic changes have been studied and show that rhythm changes and ectopic beats occur commonly following the introduction of the endoscope and revert to normal soon after the completion of the examination [5-7]. The development or worsening of pre-existing ST segment depression has also been noted during endoscopy [5]. This also reverted to baseline levels during the recovery phase. It was noted that ECG changes were encountered more frequently in patients with ischaemic or valvular heart disease [6-8]. A more recent study used rate pressure product as an index of cardiovascular stress and concluded that stress during endoscopy was mild to moderate and that careful sedation could minimise the stress [9]. This study also revealed ectopic beats and transient arrhythmias occurring during endoscopy.

Hypoxia following administration of sedative drugs and following introduction of the endoscope has also been assessed by several workers. The effects of diazepam alone or in combination with an opioid analgesic have been studied in healthy volunteers and in patients with chronic obstructive pulmonary disease [10,11]. Diazepam alone caused no significant change in oxygen tension. Pethidine, however, caused a significant reduction in oxygen tension and increase in carbon dioxide tension. The combination of diazepam and pethidine caused similar changes in oxygen and carbon dioxide tensions compared to pethidine alone. This has been confirmed during endoscopy. Use of a narrow diameter endoscope has been shown to cause less hypoxia than a standard diameter endoscope

(8,12,13). Intravenous midazolam has replaced diazepam in many units due to the potential advantages of shorter half-life with rapid recovery, and lack of venous irritation and phlebitis. However, a recent study has demonstrated that marked hypoventilation and reduction in oxygen saturation occur following the administration of midazolam (14). Endoscopy without sedation has also been studied and showed that significant reductions in oxygen tension follow introduction of the endoscope whether sedative drugs were given or withheld (8,15,16).

In most of these studies hypoxaemia was assessed mainly by intermittent sampling from an artery either via an indwelling cannula or by repeated puncture. Ear oximetry was used by two groups and provided a continuous trace of arterial oxygen saturation (17,18). Examination of the trace revealed transient reductions in saturation which could easily be missed by intermittent sampling. Rostykus and his co-workers demonstrated changes in ECG rhythm concurrent with desaturation using continuous oximetry and ECG measurement (17). No previous study has evaluated the extent of ST depression. The ear oximeter has now been superceded by the pulse oximeter due to its simplicity and relatively low cost . One study has demonstrated the value of pulse oximetry during upper gastro-intestinal endoscopy and suggested that insufflation of oxygen via nasal cannulae may limit reductions in arterial oxygen saturation (19).

The present study has confirmed the findings of other workers which demonstrate that arterial oxygen saturation is reduced when benzodiazepine and opioid are combined as sedatives, and that cardiac arrhythmias occur during periods of desaturation.

A relationship between ST segment depression and periods of desaturation has also been demonstrated. The extent of ST segment change found during this study is in general small and its detection during endoscopy may prove difficult. Pulse oximetry provides continuous information of the patient's oxygenation. The oximeter, via a signal strength indicator, provides a qualitative indication of pulsatile flow at capillary level implying that cardiac output is present. Information from pulse oximeters is often presented as an auditory tone whose pitch changes with oxygen saturation. Thus a fall in oxygen saturation can be heard. It would therefore appear that pulse oximetry would be an appropriate monitor in a darkened environment such as that found during endoscopy.

The persistence of hypoxia beyond the completion of endoscopy has not previously been commented upon but has been clearly demonstrated in this study. Monitoring of oxygenation should continue in the early recovery period until baseline saturations are achieved.

The Association of Anaesthetists has recently published guidelines for monitoring during anaesthesia. This document recommends that "...adequate monitoring is needed during brief anaesthetics or when using local anaesthetic or sedation techniques which may lead to loss of consciousness or to cardiovascular or respiratory complications". In particular they recommend that heart rate and arterial pressure are recorded regularly and at a frequency relevant to the condition of the patient, and suggest that pulse oximetry should be used during short procedures such as dental treatment, endoscopy, cardioversion and electroconvulsive therapy (20). The results of our study would support the view that continuous monitoring of arterial oxygen saturation should now be considered mandatory during endoscopic procedures where sedative agents are employed.

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Peebles Hydro Hotel

Some participants at the Registrars' Meeting, Aberdeen

REGISTRARS' MEETING
ABERDEEN ROYAL INFIRMARY, JUNE 9TH.

The Medico Chirurgical Hall at Aberdeen Royal Infirmary was the venue for the Registrars' Meeting organised by Dr.J.D.McKenzie. The President of the Society, Dr. Greg Imray, welcomed those attending and invited Dr. McKenzie to introduce the speakers for the morning session which had the general theme of "Nutrition".

The first speaker was Dr. Peter Garlick, Senior Principal Scientific Officer at the Rowett Institute, and he spoke on aspects of protein metabolism, particularly the use of amino acids in parenteral nutrition and their part in protein synthesis. He suggested that there was no convincing evidence justifying the routine use of branched chain amino acids in improving protein synthesis. Dr.Kathleen Ferguson, registrar in anaesthetics and holder of a British Journal of Anaesthesiar research Fellowship, presented the results of experiments on the effect of anaesthetic agents on tissue protein synthesis in rats.

There was a significant reduction in liver protein synthesis in fed rats with all agents, and in fasted rats with halothane, enflurane and propofol. A further paper on protein synthesis was presented by Dr. Jane Burns, Senior Registrar. She described the methods and results of experiments on protein synthesis in skeletal and cardiac muscle in patients having coronary artery bypass surgery using 13C labelled leucine. Approximately 4.6% of cardiac muscle protein is replaced daily, compared with 1.7% of skeletal muscle protein. The final speaker for the morning was Dr. Ian Broom, consultant in Chemical Pathology, and his topic was the metabolic response to sepsis. This is different from that to trauma and may be due to a defect in central energy substrate metabolism. There appears to be involvement by cytokines in the metabolic response to sepsis and the future might reveal a role for interleukins 1 and 6 in this.

After lunch the afternoon session was of a more varied nature and was chaired by the President. Dr. Andrew Norton, Lecturer in anaesthetics, spoke on the development and some pharmacokinetic properties of flumazenil. He described the results of two studies with midazolam and flumazenil in endoscopy and day case patients. Continuous local anaesthetic blockade by femoral sheath catheter was the topic presented by consultant anaesthetist Dr.Ian Levack. He described the background and anatomy of lower limb blocks, and explained the technique of femoral block with the aid of a video recording. A comparison with extradural block for total knee replacement was made. Dr.Ralph Kaldas, registrar, then reminded the meeting of the background to the collection of blood for transfusion and described the effects of infusion pressure on blood constituents. He showed that there were no alterations in haemoglobin, potassium, AST or LDH with transfusion under pressure except in 4 week old packed cells. The final speaker was Dr. John Ross, Senior Lecturer in Hyperbaric Medicine, who stood in at short notice for his namesake, Dr.D.G.Ross, and spoke on the protection against smoke inhalation in aircraft. In fires chemical asphyxiation due to hydrogen cyanide, carbon monoxide and hydrogen sulphate occurs, as well as simple asphyxiation. The development of smoke hoods for aircraft was described, and a video shown which graphically illustrated the dangers.

The meeting was then concluded and the President expressed thanks to all who had participated, following which there was an opportunity for social intercourse over afternoon tea.

HISTORY OF ANAESTHESIA SOCIETY
AND
SCOTTISH SOCIETY OF ANAESTHETISTS

A joint meeting of the History of Anaesthesia Society and the Scottish Society of Anaesthetists was held in Appleton Tower, University of Edinburgh on July 7th and 8th, 1989. This happily coincided with the 75th Anniversary of our Society and resulted in the presentation of much fascinating material on the history of anaesthesia in Scotland. The first session on Friday morning was devoted to Anaesthesia in Edinburgh, and abstracts of the papers presented follow. The Friday afternoon session consisted of free papers, and in the evening, following a reception in the Department of Anaesthetics at the Royal Infirmary, the company repaired to the Royal College of Surgeons, Nicholson Street, for Dinner.

On Saturday both sessions of the meeting continued on the theme of Scottish Connections and abstracts of the presentations also follow. The final paper, given by Dr.A.W.Raffan on the history of the Scottish Society of Anaesthetists, is printed in full.

Also included is an abstract of one of the free papers on "Anaesthetic highlights in Dundee", and some biographical details of Dr.Arthur Mills who was one of the 14 founder members of the Scottish Society. For these I am indebted to Dr.S.McGowan, and my thanks are due also to Dr.I.Levack for supplying early photographs of the Balmoral Hotel, to Dr.Raffan for readily agreeing to allow his paper to be printed in full, and to the many contributors to this successful meeting.

THE SCOTTISH SOCIETY
DR. A.W. RAFFAN

It is a pleasure to address this meeting with a few remarks about the Scottish Society of Anaesthetists. Seventy-five years ago a small group of doctors in Scotland, all in general practice, but all known to be interested in , and practising anaesthetics, decided to meet to discuss their problems. Fourteen were invited to dinner in the Balmoral Hotel, Princes Street, Edinburgh, on the 20th February, 1914.9

After dinner a business meeting resolved, unanimously, that a society be formed to be called The Scottish Society of Anaesthetists with the objects of: *"promoting the study of the science and practice of anaesthetics, the proper teaching thereof, and the conservation and advancement of the interests of anaesthetists."*

Ordinary membership was to be restricted to members of the medical profession practising the specialty of anaesthetics.Eleven doctors attended Drs. McAllum, Torrance Thomson, Gibbs,Jones and Ross of Edinburgh; Drs.. Boyd, Lamb, Napier and Fairlie of Glasgow; and Drs Johnston of Aberdeen and Mills of Dundee. Dr. Home Henderson of Glasgow, and Drs. Ogston and Robertson of Aberdeen sent apologies and were admitted to Founder Membership at the first Regular Meeting which was held in the Guild Hall, Edinburgh on 18th April, 1914. Dr. McAllum, who had been elected first President, presented his address entitled "False Anaesthesia"(1). He was a keen and expert chloroformist, and a leading exponent in paediatric anaesthesia (2) but sadly he died shortly afterwards.

The distractions of the First World War might well have destroyed this fledgling Society for it was five and a half years before the second regular meeting was held in November 1919 under the Presidency of Dr. Boyd. Dr. Johnston reported the death of another Founder Member, Dr. James Robertson of Aberdeen, who had been killed in action in March 1918 when serving as O.C. of the 2/1 Field Ambulance of the Highland Division.

In 1920 the Annual Meeting was held in Aberdeen when Torrance Thomson was President and the Vice-President, John Johnston, read a paper on "The importance of Carbon Dioxide in relation to general anaesthesia." In November of that year Johnston became President, and he was re-elected President in November 1921 when he spoke about "Pre-anaesthetic intoxication."

In April 1922 Alexander Ogston of Aberdeen read his paper on "Notes on the administration of ether by the per-inhalation method." He claimed by using his adaptation of the Bellamy-Gardner mask he found no difficulty in inducing even a powerful subject with straight ether (3). Those who have used this mask will agree that the simple addition of the chimney served to trap the expired ether vapour, thereby increasing the concentration and speeding the induction by the partial retention of expired carbon dioxide. Indeed this mask was so popular with the House Physicians who had to give the emergency anaesthetics in these days that they invariably armed themselves with one when they went further afield. You will appreciate my chagrin many years later when attending a course in London Dr.Ronald Jarman held up this mask and invited his audience to name it. Scotsmen are naturally reticent, and I am one, but when he got no response and gave it some other name, it was too

much. I tried to correct him, but to no avail.

The controversy about the use of chloroform raged throughout this period. I quote Dr. David Lamb of Glasgow: "We had to fight against the belief and teaching of Sir William Macewen and all the other Scottish surgeons that chloroform was the one and only anaesthetic, even though the death rate "on the table" was very high, an average of fifty annually in Glasgow Royal Infirmary"(4). When Arthur Mills of Dundee was President in 1923 his address was: "The present position of Chloroform." He was an outspoken critic, no doubt because so many anaesthetics were being given by the casual anaesthetist. The choice of chlorofrom by the tyro was obvious - it is non-irritant, very quick in the production of a relaxation which satisfied the surgeon, and he could easily say " the operation was successful, but the patient died." Dr.Mills stressed the teaching of open ether to his students, and at a meeting in the 1950's I recall that he addressed the Society as follows: "When I went to France in the First World War I left all my juniors with the instruction that open ether, slow as it may be, should be the routine", and he concluded his exhortation as he slowly dropped the ether on the mask - "This do ye in remembrance of Mills."

In 1926 the Society was host to the "Associated Anaesthetists of the United States and Canada" represented by Drs. Mary Batsford of San Francisco, Wesley Bourne of Montreal, Wade Elphinstone of Pittsburg, Hammard of White Plains, New York, McMechan of Avon Lake, Ohio, and McKesson and Schuey of Toledo, Ohio. Ross McKenzie gave a lantern lecture and demonstration on "Carbon Dioxide in Nitrous Oxide and Oxygen Anaesthesia." "Re-breathing," he claimed, "when properly regulated was an important factor in gas and oxygen anaesthesia since it conserved the body heat, retained the expired carbon dioxide, and delayed the onset of surgical shock." Torrance Thomson demonstrated ethyl chloride and ether with the Ogston mask, and the President, Dr.Stuart Ross, spoke on "The provisions of an anaesthetic service." He set out to prove the need for increasing the supply of skilled anaesthetists, and that special instruction should be given to resident housemen immediately on taking office. No hospital had the right to offer the service of skilled anaesthetists for a few hours only in the day, since a twenty-four hour service alone could reduce the mortality rate (5).

On this subject of training Dr.Ogston, President in 1927, spoke on "Everyday anaesthesia," dealing with the teaching of undergraduates. In Aberdeen the students had to attend a minimum of four lectures, and administer a minimum of twelve anaesthetics. "Not a very satisfactory state," he suggested, "but improvement seemed impossible because the curriculum is so overloaded with subjects that most students find it difficult to give much time to anaesthetics - they are usually attending a clinic in a subject in which they have to face examination" (6).

In May 1928 Dr.Barras was elected President but tragically he was killed in a car accident two months later, and Dr.Ross MacKenzie, Vice-President, took over and he discussed "Post-anaesthetic sickness." In later years he, Ross McKenzie, was invited to reminisce in the first edition of our Newsletter in 1960, and he recalled " the Founders and Pillars of our Society - Stuart Ross was a robust man, an administrator and the author of an excellent book on practical anaesthetics. Fairlie was a man of refined character with great ability and vision. He was the perfect anaesthetist and had the complete confidence of the surgeons of Glasgow. Torrance Thomson was the scientific anaesthetist and observer. He was a philosopher and appeared to scorn the mundane things of everyday life. Napier was the genial, cynical, highly efficient secretary." He went on to discuss situations in his practice in Aberdeen which required considerable diplomacy in handling (7). One must appreciate his difficulties, common to others in his position, for he was the first doctor in Aberdeen to forsake general practice and concentrate on anaesthetics, rendering himself dependent financially on private practice, his hospital work being honorary. Ross McKenzie eventually persuaded the Governors to appoint our first "resident" anaesthetist in 1937.

In Dundee in 1930 Torrance Thomson entertained his audience with "Random reflections". At this time anaesthetists were uneasy about the traditional methods of saturating the patients with ether or chloroform, and with the co-operation of his surgeons they attempted "balanced anaesthesia" as described by McKesson. "What we are searching for," he said, "is a method immediately safe with adequate operating facilities, and free from post-operative ill effects. Surgeons have become accustomed to the flaccid abdomen of deep etherisation in which they can roam freely without troubling much about the effects of their stimuli, but now, with nitrous oxide, oxygen anaesthesia, if it is to have a fair chance in abdominal surgery, the surgeon must in the first place reduce his demands regarding relaxation, secondly he must remember that he has a narrow zone of anaesthesia on which to draw; any extra stimulus may bring the patient outside this zone. There is still," he continued, " a belief, outside Scotland, that chloroform is with us the anaesthetic of choice, comparable to the belief that we all wear kilts, and subsist on haggis, porridge and whisky. It is true that most of us make a modest use of these commodities, and it is true that we make moderate use of chloroform, but in inhalation technique ether predominates, and it is probable that in time ether will be superceded, but that may take a long time. In the meantime we should welcome any adjuvant which lessens the quantity of ether used" (8).

In 1931 the first Lady President, Dr. Winifred Wood, addressed the Society on "Pre-medication with special reference to rectal ether" - a method she had studied under Gwathmey in America.

When in 1936 John Johnston of Aberdeen became President for the third time, a quite unique honour, he

spoke on intravenous evipan sodium and the question of dosage demanded close attention. He described "biological dosage, twice the sleep dose for a short operation, three times for a longer one. The speed of the injection is important; if sleep is slow to come, pause before continuing" (9). When one considers that anaesthetists in these days were preoccupied with the clear and definite signs of ether anaesthesia, it must have been extremely worrying to use a drug with no such signs. I am indebted to Dr.Johnston for leaving me copies of the early minutes of our Society and also many recorded details of deaths associated with anaesthesia in Aberdeen in the decade 1920 to 1930. He also left me a Scroll presented to the original Editorial Board of the British Journal of Anaesthesia in 1927 by the International Anaesthesia Research Society. It is interesting to note the original Board of eleven contained three of our Past-Presidents - Henry Fairlie, John Johnston and Torrance Thomson. It is also interesting to note that in 1915 a young midshipman was landed in Aberdeen from HMS Collingwood suffering from acute appendicitis. Professor (later Sir) John Marnoch operated and John Johnston gave the anaesthetic. The patient was Prince Albert, later to be anaesthetised by another President of our Society, John Gillies, when Albert had become King George the Sixth.

Anaesthetists of my vintage form the last links with the old pre-war days when we moved from open ether with ethyl chloride and very occasionally chloroform to nitrous oxide, oxygen and ether and spinal anaesthesia. My own interest in this specialty, like many others, was born of necessity when as housemen we were expected to cope with night emergencies. When I worked in Eastbourne I saw at first hand the notorious Bodkin Adams. He was in general practice and had an appointment as visiting anaesthetist, a most undesirable character even to my young eyes. Reasonably proficient no doubt, but his real skill lay in persuading his elderly lady patients to alter their wills in his favour. You will understand that I had a close interest in his later career when in 1957 he was charged with murder, and on reading an account of his trial it would appear that one of the expert witnesses for the prosecution, the eminent Guys Physician, A.H.Douthwaite, overdid his case for the prosecution and in the hands of a crafty defence Counsel, Geoffrey Lawrence, the Judge, Lord Devlin, was made to feel the judgement was being taken out of his hands. Perhaps because of that he escaped the ultimate by hanging. His activities did not inspire me to take up anaesthetics.

The hospitals in Scotland began to appoint resident anaesthetists about this time. In Aberdeen the first was in 1937, and I followed in 1938/9 under the guidance of Ross Mackenzie. Perhaps for me the great adventure in these days was to anaesthetise for a partial thyroidectomy, a simple procedure nowadays, but in these early days pre-operative assessment was minimal as was the preparation. The patients tended to be in a highly toxic state. We followed the method of "stealing" the thyroid familiar to all, and the surgeons for reasons of their own did not favour the endotracheal tube and so one used the face mask devised by Hewer.

When war came in 1939 our Society went into limbo once again, this time for eleven years. In the words of Sir Donald Douglas, a guest speaker at our Society meeting in 1975 - "The average anaesthetist entered the war as a purveyor of sleep but ended it as a skilled physician of trauma." In my own experience my work varied from general surgery with Richard Handley and on occasion Sir Heneage Ogilivie, urology with Ogier Ward, ophthalmology with Hyla Stallard who became very appreciative of continuous intravenous thiopentone, maxillofacial surgery with Michael Oldfield and Reginald Murley where one had to master blind nasal intubation, and finally in Field Surgical Units with Tom Brownlee, Rodney Smith (later Lord Smith), and John Fairbank where one became familiar with the Oxford Ether Vapouriser(12), and where one worked closely with Gladwin Buttles Field Transfusion Units.

And so back to civilian life as a resident anaesthetist once more with a very much reduced salary, attending courses in Oxford, London and the Thoracic Unit of George Mason at Shotley Bridge to learn the intricacies of thoracic anaesthesia from Joan Miller, all of which fitted me to obtain an Honorary Appointment on our staff in 1946, no hospital salary apart from the municipal hospitals and the Red Cross Sanatorium.

I apologise for these personal reflections but there was this gap of eleven years before the Society was reconstituted in 1950 by Drs. Pinkerton of Glasgow and Gillies of Edinburgh.

Dr.H.H.Pinkerton, like all others of that era started in general practice and specialised in anaesthetics. By the end of the Second World War he was well established in the Western Infirmary in Glasgow and in private practice. He set about establishing a department of anaesthesia, not at all easy, but eventually his Board agreed and he was appointed Consultant in Charge. He was always enthusiastic about the welfare of this Society and he became President in 1951. The re-birth of this Society in Scotland after a break of eleven years was largely due to his efforts along with Dr.John Gillies.

Dr.John Gillies served in the Infantry in the First World War where he won a Military Cross for gallantry. From general practice with anaesthetics in Yorkshire he came under the influence of John Hunter and Ivan Magill to learn more of his chosen specialty. From London he returned to Edinburgh in 1932 with an Honorarium of 50 pounds per annum at the Children's Hospital. He was now dependent on the goodwill of the surgeons for private work which meant, I quote him - "Rushing from Nursing Home to Hospital to Nursing Home, lumbered with heavy equipment, a pressurised, competitive existence"(13). Having been appointed President in waiting in 1939 he at last took up office in 1950.

This rejuvenated Society now expanded rapidly in members and in enthusiasm. Apart from the Annual General Meeting , there is a Scientific Meeting and a Registrars Meeting each year, and a Registrar's prize is awarded. Since 1977 there is a Memorial Lecture in honour of John Gillies. His family endowed this lectureship, I quote - " to reflect his interest in the young anaesthetist and his special concern for safe clinicl anaesthesia" (14).

The first Gillies Memorial Leeture was delivered by Professor, Sir Gordon Robson in November 1978 and I quote him as follows - "Until curare became established in the immediate post-war years an anesthetist's reputation and indeed his livelihood was very firmly based on his art and technical competence." Both Great Wars in this century provided a major stimulus to anaesthesia. When John Gillies was President of the Anaesthetic Section of the Royal Society of Medicine in 1951 he gave his famous address on Physiological Trespass. "There is no doubt," said Sir Gordon, "that his results of total spinal sympathetic blockade were impressive, but few anaesthetists of that day would have backed their own judgement to such a remarkable extent" (15).

One must also make mention of a few other stalwarts of the Scottish Society:

A.C.Forrester, the first Professor of Anaesthetics in Scotland, appointed in 1967, a charming, quiet enthusiast for everything concerned with anaesthetics and this Society. What a pity men like Gillies and Pinkerton were not so honoured with a Chair, but then they truly were legends before their time.

J.D.Robertson, Professor in Edinburgh, he was our President in 1964, our Jubilee year, held naturally in Edinburgh when he made a special plea for more time for our specialty in the undergraduate course.

Donald Campbell, Professor in Glasgow, the first resident Scot to be appointed Dean of the Faculty.

Malcolm Shaw was a backbone of this Society in these post-war years; Secretary and Treasurer from 1957-63, he created the News Letter in 1960 and continued to edit it until 1967. I have referred repeatedly to that excellent production. He was President in 1969.

The Society has had successful overseas trips, to Scandinavia in 1965, and to Poland in 1970. The organisation of the latter was in the hands of Donald Campbell and this surely did exercise all his talents; permits were necessary and the blessing and indeed the patronage of their Minister of Health and Social Welfare. We had to move about in a group, not allowed to split up; the hospitality, as I expected having worked with the Poles for a spell in Italy, was excellent, but one always had the feeling of being watched closely. Our young courier, well indoctrinated to the communist philosophy, never missed an opportunity to spread his gospel, but in this he failed for he was greeted with laughter when he made his final little speech - "You Scots and we Poles have much in common, we both have our Big Brother watching over us." When asked to explain he said - "We have the Russians, you have the English."

The problem of mortality has always been high in the Society's deliberations (16). Now the Association of Anaesthetists has issued recommendations in monitoring patients. They say,"If anaesthetists adopted better standards of monitoring, there could be an improvement in safety." On this subject I would quote two of our Gillies Memorial Lecturers. Dr.Peter Dinnick in 1980 said - "There is a tendency to rely too much on the ECG and other unreliable monitors at the expense of simpler methods, feeling the pulse, watching the respiratory movements. Fear God, keep your finger on the pulse and when in doubt give oxygen. It is sad to reflect that the causes of deaths are, by and large, simple, and usually follow lack of observation of simple precautions and of clinical alertness. The fault, dear Brutus, lies not in our stars but in ourselves" (17). Dr.Cecil Gray in 1982 said - "Each attempt to make things easier and safer by artificial means as opposed to clinical observation brings new hazards. It may be sometimes more dangerous to take the B.P. frequently during short procedures than to keep a finger on the pulse" (18).

When our founders met in 1914 they had a dream, a dream to promote the study and teaching of anaesthetics and the status of the anaesthetist. And now just 75 years later - less than the lifetime of some of us - their dream has been fulfilled. No longer, in the words of Sir Donald Douglas, is the anaesthetist " a mere purveyor of sleep".

The least we can do, Ladies and Gentlemen, is to pay homage to their memory and to that dream.

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Dr. Alexander Ogston, Aberdeen

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Dr. John Johnston, Aberdeen

Dr. Harry Fairlie, Glasgow

Dr.Ross McKenzie, Aberdeen

Dr. John Gillies, Edinburgh

Dr. Arthur Mills, Dundee

SESSION I : ANAESTHESIA IN EDINBURGH

JAMES YOUNG SIMPSON
DR.N.H.GORDON

James Young Simpson's life spanned the years from 1811 to 1870. When, at the age of fourteen, he enrolled at Edinburgh University the dogmatic opinion of the medical teacher was seldom challenged, the pharmacopoeia was bereft of effective drugs and the few patients who agreed to an operation chose their surgeon by his reputation for speed with the knife.

Simpson was so appalled by the suffering of the patient, forcibly held down and strapped to the operating table, that he nearly abandoned his medical studies for law.

The energy, determination and popularity of Simpson saw him appointed, at the age of twenty eight, to the only chair of midwifery in the country. The relief of pain remained his major goal, employing ether and then by self-experimentation introducing a more effective agent, chloroform.

Today it is hard to understand the reluctance and even resistance to the widespread adoption of anaesthesia for both obstetrics and surgery. Simpson's compassion, as witnessed in his tireless campaigning for the acceptance of anaesthesia won him the adulation of his patients and his compatriots.

1850 TO 1900
DR.J.WILSON

The second half of the nineteenth century saw the consolidation of what could be but described as the Edinburgh Chloroform Technique. This centred on the use of chloroform as the universal anaesthetic agent administered by way of a simple, apparatus-free method, by non-specialist administrators. It was the era of surgically managed anaesthesia with the state of anaesthesia very much secondary to the surgical operation.

During this era there was virtually no reaction to these methods which were suited to the development of the surgical specialty. The Royal Infirmary changed site for surgical reasons, and nursing services began to be developed along modern lines. Anaesthesia is reviewed over this period in conjunction with these relevant changes in medical and nursing practices. The Edinburgh chloroform practice was safe in surgical hands and laid the foundations for the development of a well-trained anaesthetic specialty in the Capital from the turn of the century.

1900 TO 1950
DR.A.H.B.MASSON

In 1900 there were no anaesthetists in Edinburgh outside the Dental Hospital. In the first year of the 20th century, however, DrT.D.Luke, one of three anaesthetists to the Dental Hospital, was appointed as anaesthetist to the Deaconess Hospital and Dr.MacAllum, later to become the First President of the Scottish Society of Anaesthetists, was appointed to the Royal Hospital for Sick Children.

Despite repeated requests from a majority of the surgical staff of the Royal Infirmary, reinforced by the manifest concern of the Crown Office about anaesthetic deaths, attempts to have an anaesthetist appointed to the Royal Infirmary were rejected. The post of "Supervisor of Anaesthetics" was created in 1912 but the Board of Management made it the prerogative of the Surgical Clinical Tutor - a trainee surgeon.

A "de facto" recognition of some anaesthetists in the Infirmary evolved but it was not until 1938 that they had any official standing or acceptance. That change was due, in large part, to the influence of Dr John Gillies who came to the Royal Infirmary in 1933. He set up the embryo Department of Anaesthetics in 1940. He also played a crucial role nationally for he held the key post of President of the Association of Anaesthetists of Great Britain and Ireland in 1947 when the profession was negotiating with government on the terms and conditions of service of doctors within the proposed National Health Service.

SIGHTS AND SITES
DR.D.WRIGHT

One of the advantages of Edinburgh is the concentration, in a small area, of the sites of medical historical interest.

Sites connected with James Young Simpson were described together with some associated with other personalities, perhaps less well known to anaesthetists. Maps of Edinburgh were made available showing these sites and a suggested tour described. On Saturday afternoon a visit was arranged for those who were interested to Simpson's house in Queen Street, where chloroform was experimented with in November 1847.

SESSIONS III AND IV : SCOTTISH CONNECTIONS

THE SCOTTISH ENLIGHTENMENT
PROFESSOR A.A.SPENCE

This term described a remarkable period commencing at the end of the eighteenth century when intensive intellectual development occurred in Scotland, especially Edinburgh. The leading figure was David Hume who founded English philosophy, and Adam Smith, Professor of Moral Philosophy at Glasgow but better known for his economic treatise "The Wealth of Nations". Joseph Black, who succeeded William Cullen as the leading figure of the Edinburgh Medical School, was a close friend of Hume and Smith. Each contributed to the work of the others. Robert Burns, Walter Scott, James Watt, the painters Ramsay and Raeburn and architects James and Robert Adam spanned the same period.

The movement had three notable effects in addition to the immediate contribution of its leading figures to learning and literature. It stimulated a change in social

and religious attitudes which enhanced the status of the ordinary citizen. It encouraged greatly the political movements which brought revolution to France and America. Finally it gave Scottish intellectuals a confidence which restored morale following the feeling of isolation after the Act of Union.
James Young Simpson was not part of the movement but he was an undoubted product of it.

FROM BOSTON TO DUMFRIES
DR.T.W.BAILLIE

It is interesting that one of the first, possibly the very first, "public" exhibitions of ether anaesthesia outside the United States of America should have taken place in a small hospital in the south-west of Scotland. Like Francis Boott's succesful administration, the operation at Dumfries was performed on 19th December, 1846, two days before Peter Squire's experiment at University College Hospital.
In all three cases an important link between Dr.Morton's etherization at Massachussets General Hospital and the trial of ether in the Old World was the wooden paddle-steamer "Acadia".

ABERDEEN, ARCHIVES AND ANAESTHESIA
DR.I.LEVACK

In 1839 the first Professor of Surgery was appointed in Aberdeen. At that time the combined Chair of Medicine and Chemistry was held by William Gregory who moved to Edinburgh five years later to become Professor of Chemistry. Immediately after qualification in 1846 another Aberdonian, James Matthews Duncan, also moved to Edinburgh. It was from Gregory that Matthews Duncan acquired a chloroform sample which he tested on himself before bringing it to the attention of Simpson at the famous supper party in Queen Street.
Before chloroform, ether had been used with varying success throughout the U.K. and on Saturday, 6th February, 1847, the first recipient in Aberdeen underwent a painless amputation. In November, William Pirrie, Professor of Surgery, used chloroform in the excision of a breast tumour ten days after Simpson read his paper to the Edinburgh Medico Chirurgical Society. Surgical arrogance and rejection greeted a proposal by the Hospital Committee to appoint a staff chloroformist in 1856. The first regular chloroformist remained in post for four years after being nominated in 1871 following a chloroform death at the hands of Pirrie. The second chloroformist was Patrick Blaikie Smith. His title was a misnomer because he was an ether devotee and he designed his own ether inhaler. A significant clinical advance in the use of open drop ether was later made during World War I by Dr.Alexander Ogston, a general practitioner, who developed his eponymous wire frame mask in order to achieve both a higher inspired concentration and a more efficient use of ether. He was not related to his namesake, the second Professor of Surgery in Aberdeen, best known for discovering and naming staphylococcus pyogenes.
Some of the earliest scientific assessment of chloroform went on in the laboratory of J.A.McWilliam who went to Aberdeen as Professor of Physiology in 1886. An important series of observations followed including the first description of ventricular fibrillation and its association with chloroform inhalation in various animals. This was contrary to the popular view of chloroform in Scotland at the time and also to the findings of the Hyderabad Commissions. Death by cardiac arrest in nervous patients breathing chloroform was as unthinkable as wound healing without suppuration. There have been paradigm changes since and established dogma continues to be eroded by scientific endeavour.

EARLY DAYS IN GLASGOW
DR.A.G.MCDONALD

This brief talk will not dwell on those medical men in Glasgow who are already known to have made a significant contribution to anaesthesia:
1. Dr.James Laurie, of Glasgow Royal Infirmary, the first to use ether in general surgery on Wednesday, 10th February, 1847 (and perhaps three weeks earlier).
2. Dr.Matthew Wylie, of the same hospital, the first in Glasgow to use chloroform in early December 1847.
3. Joseph Lister, Professor of Surgery in Glasgow, who in addition to his historic work on antisepsis also promoted the teaching of anaesthesia during his nine years in Glasgow 1860 - 1869.
4. William Macewen, also Professor of Surgery in Glasgow, who revolutionised anaesthetic practice by being the first to intubate the human subject in 1878 and who also furthered the cause of anaesthesia by insisting on every medical student giving at least twelve chloroform anaesthetics under his personal instruction, thus earning the student a certificate of proficiency in anaesthesia.
Nor will there be time to pay tribute to the many other Glasgow doctors who became early specialists in anaesthesia and who brought our specialty a respect and standing which it had not hitherto enjoyed. However, there is one man who deserves special mention in this summary:
Dr.Harry Fairlie was appointed anaesthetist to the Royal Infirmary in 1910 but subsequently moved to the Western Infirmary and Yorkhill Hospital for Sick Children where for nearly thirty years he was the most renowned anaesthetist in Scotland and became a household name by editing, along with Dr.Stuart Ross of Edinburgh, their "Handbook of Anaesthetics". Dr. Fairlie substantially revised the third edition (1929), and was effectively the sole author of the fourth edition (1935), an achievement for which he never received adequate credit. He was a founder member of the Scottish Society of Anaesthetists in 1914, and its President in 1925; he was Honorary Secretary of the Anaesthetic Section of the B.M.A. in 1922, and its President in 1931; he was President of the Anaesthetic Section of the Royal Society of Medicine in 1933. He died in 1937, aged 57 years while still in post, and still publishing. He was a most distinguished anaesthetist

and almost certainly contributed more than anyone else to the standing of anaesthesia in Glasgow during the first hundred years of anaesthesia.
This presentation will centre on a man called John Lewellin, who was undoubtedly the first to employ ether in Glasgow in the very early days of 1847. Research of the Glasgow newspapers of the time, and there were many of them (Glasgow Argus, Glasgow Constitutional, Glasgow Courier, Glasgow Examiner, Glasgow Herald and the Scottish Guardian), has revealed how he maintained an extraordinary public profile of himself and of his etherisation, during the brief time he worked in Glasgow. His origins and his career both before and during his time in Glasgow, together with his subsequent whereabouts were presented. It is a story of an unsung but deserving pioneer.

ANAESTHETIC HIGHLIGHTS IN DUNDEE
DR.S.W.MCGOWAN

The first record of an anaesthetic agent being demonstrated in Dundee was an article in the Dundee Advertiser on September 30th, 1836. This described a lecture/demonstration on nitrous oxide, given by Dr.Fyfe at the Watt Institution. Seven gentlemen inhaled the gas with widely varying results.
Between 1840 and 1843 John Crighton, surgeon to Dundee Royal Infirmary, successfully used acupuncture to treat painful conditions such as sciatica, and to promote absorption of effused fluids in tumours. All his cases of hydrocele were cured by acupuncture alone.
Ether became available in 1847 and its success was immediate, but soon it was superceded by chloroform which remained the standard anaesthetic agent until the 1920's.
Spinal anaesthetic was first reported in Dundee in 1908-9 when 22 spinal injections of Stovaine were given out of 2124 anaesthetics. In the following year Novocaine was given by spinal injection in 16 cases, Stovaine in 10 cases, and morphine and hyoscine in 8 cases. Although no further details are given as to dosage, type of case, or even whether it was used for surgical operation or pain relief, this may be the first record of the use of morphine by spinal injection.

DR.ARTHUR MILLS
M.D.,M.R.C.P.,D.A.,F.F.A.R.C.S.

Arthur Mills was born on the 24th. November, 1875. On leaving school he became a banker and worked in Portugal and later Brazil. It was only in his late twenties that he decided on a medical career, and entered St. Andrews University where he graduated M.B.Ch.B. with distinction in 1909. In that year he also married his wife Elizabeth, who was also a doctor, and became a general practitioner in Kingskettle and Ladybank in Fife. He obtained his M.D.(St. Andrews) in 1913.
About this time the directors of Dundee Royal Infirmary decided that the time was ripe for the appointment of an anaesthetist, and Arthur Mills was invited to move to Dundee and take up the post of Anaesthetist and Instructor in Anaesthesia.
In February, 1914, Dr.Mills was one of the founder members of the Scottish Society of Anaesthetists. He became its President in 1925-26. Apart from his absence on military service from 1916 to 1918, he remained in charge of the Department of Anaesthetics in Dundee for over thirty years. In 1944 he tendered his resignation and was appointed Consulting Anaesthetist by the Directors of the Infirmary as a mark of their appreciation. He had "rendered invaluable service by organising the Department to a high standard of efficiency and by introducing new measures designed for greater safety."
As a lecturer in anaesthetics to the University of St.Andrews, Dr.Mills taught a whole generation of medical students the principles of safe anaesthesia. He was very much against the teaching of chloroform anaesthesia to students, considering it much more important to teach them open ether well, and to impress on them the added dangers of chloroform.
With regard to intratracheal anaesthesia, he thought it was often unnecessary, and adapted an airway for use in head and neck surgery by fitting a connector which linked up to the anaesthetic circuit. He wrote a Manual of Anaesthetics which unfortunately was never published as he felt dissatisfied with it. It gave detailed descriptions of the signs of anaesthesia during open ether with valuable practical advice on managing patients during the anaesthetic, all based on sound principles and long experience.
Arthur Mills passed his M.R.C.P. examination in Edinburgh in 1927 and was awarded the D.A.(England) in 1935 and the F.F.A.R.C.S. in 1949. He continued to run a busy general practice in Dundee in addition to his anaesthetic commitments. Among his numerous publications were "Gastro-intestinal haemorrhage in a new-born child", "Oral sepsis in general practice", "The Wassermann Test in general practice" and "General anaesthesia and the general practitioner". He was a member of the British Medical Association and the Forfarshire Medical Association.
Dr.Mills died on 7th January, 1959, at the age of 83.

DR.S.W.MCGOWAN

Readers may be interested in other articles of historical interest which have appeared in the Newsletter over the years. While many of the Presidential Addresses, Guest Lectures and Gillies Memorial Lectures have included historical notes, the following are devoted substantially to the history of anaesthesia in Scotland.

1. 1960 Dr.J.Ross McKenzie - A milestone in the history of Scottish Society of Anaesthetists.
2. 1966 Dr.B.C.Hovell - A history of the Scottish Society of Anaesthetists.
3. 1972 Dr.John Gillies - Retrospect.
4. 1974 Dr.O.M.Watt - Pioneers and their problems.
5. 1979 Dr.Lawson D. Davidson - The Origin and History of the Scottish Society of Anaesthetists.
6. 1984 25th edition of the Newsletter - Articles about Inverness, Edinburgh, Glasgow and Dundee.

Editor

PRESIDENTS OF THE SCOTTISH SOCIETY OF ANAESTHETISTS

1914	Dr.D.C.A. McAllum	1961	Dr.J.W.L. Bain
1919	Dr.J. Paton Boyd	1962	Dr. Margaret Muir
1920,21,36	Dr.J. Johnston	1963	Dr. Alex. C. Forrester
1920,30	Dr.H. Torrance Thomson	1964	Dr.J.D. Robertson
1922,27	Dr.A. Ogston	1965	Dr.A.G. Miller
1922	Dr.D. Lamb	1966	Dr.J.A. Bolster
1923	Dr.J.H. Gibbs	1967	Dr.A.W. Raffan
1924,33	Dr.H.P. Fairlie	1968	Dr.J.R. Kyles
1925,34	Dr.A. Mills	1969	Dr.M. Shaw
1926	Dr.J.S. Ross	1970	Dr.K.C. Grigor
1928	Dr.W. Barras	1971	Dr.D.W. Shannon
1929	Dr.J. Ross MacKenzie	1972	Dr.J. Crawford
1931	Dr.W. Wood	1973	Dr.W.N. Rollason
1932	Dr.D.S. Middleton	1974	Dr.F. Holmes
1935	Dr.W.B. Primrose	1975	Dr.H. Fairlie
1937	Dr.D. Kier Fisher	1976	Dr.D. Beaton
1938	Dr.J.D. Stewart	1977	Dr.J.I.M. Lawson
		1978	Dr.A.H.B. Masson
1950	Dr.J. Gillies	1979	Dr.L.D. Davidson
1951	Dr.H.H. Pinkerton	1980	Professor D. Campbell
1952	Dr.T.J.C. Macdonald	1981	Dr.A.C. Milne
1953	Dr.W.M. Shearer	1982	Dr.A.J. Booth
1954	Dr.I.M.C. Dewar	1984	Dr.H.Y. Wishart
1955	Dr.F. Gibbs	1985	Professor Sir Gordon Robson
1956	Dr.H.B. Wilson	1986	Dr.A.I. MacKenzie
1857	Dr.R. Lawrie	1987	Dr.W.R. MacRae
1958	Dr.R.N. Sinclair	1988	Dr.A.M. Reid
1959	Dr. Alison Ritchie	1989	Dr.J.McG. Imray
1960	Dr.A. Tindal		

GUEST SPEAKERS at the ANNUAL GENERAL MEETING

1951	Dr.W.W. Mushin	1960	Sir Dugald Baird
1952	Dr.M.H. Armstrong Davison	1961	Dr.G.S.W.Organe
1953	Dr. Ivan Magill	1962	Professor W.D.M. Paton
1954	Professor R.R. Macintosh	1963	Professor E.A. Pask
1955	Dr.T. Cecil Gray	1964	Dr. Martin Holmdahl
1956	Dr.M.D. Nosworthy	1965	Professor J.G. Robson
1957	Dr.J. Alfred Lee	1966	Professor A. Crampton Smith
1958	Dr.L.B. Wevill	1967	Dr. Sheila Kenny
1959	Dr. Margaret Hawksley	1968	Dr.R.B. Goudie
1969	Dr.R.P.W. Shackleton	1980	Pofessor M.D. Vickers
1970	Professor J.W. Dundee	1981	Dr.P.W. Thomson
1971	Dr.A.R. Hunter	1982	Professor T.C. Gray
1972	Professor J.P. Payne	1983	Professor J.W. Sandison
1973	Dr. Hamish Simpson	1984	Dr. Michael Rosen
1974	Dr.D.D.C. Howat	1985	Professor Bernard Wolfson
1975	Sir Donald Douglas	1986	Professor P.R. Bromage
1976	Professor J.S. Robinson	1987	Dr.J.F. Nunn
1977	Professor J.A. Thornton	1988	Professor Donald Campbell
1978	Dr.W.S. Wren	1989	Professor C.J. Hull
1979	Professor E.A. Cooper		

GILLIES MEMORIAL LECTURERS

1978	Professor J.G. Robson	1984	Dr.H.W.C. Griffiths
1979	Dr.G. Jackson Rees	1985	Professor M.K. Sykes
1980	Dr.O.P. Dinnick	1986	Dr.A.H.B. Masson
1981	Professor J.D. Robertson	1987	Dr.J.I.M. Lawson
1982	Professor T.C. Gray	1988	Dr.D.B. Scott
1983	Professor J.P. Payne	1989	Dr.W.R. MacRae

REGISTRAR'S PRIZE WINNERS

1951	Dr.J.G. Robson
1952	Dr.J.P. Payne
1953	Dr.F.S. Preston
1954	Dr.J.B. Stirling
1955	Dr.A.H.B. Masson
1956	Dr.D.B. Murray
1957	Dr.D.B. Scott
1958	Dr.D.C.C. Clark
1959	Dr. Brian Kay
1960	Dr.G.R. Dow
1961	Dr.D.D. Moir & Dr.J.M. Reid
1962	Dr.D.J.F. MacDonald
1963	No award
1964	Dr.D.P. Braid
1965	Dr.G.S. Robertson
1966	Dr.B.C. Hovell
1967	Dr.L.V.H. Martin
1968	Dr. John Smart
1969	Dr. Joyce Newman
1970	Dr.G.J.B. Robinson
1971	Dr.J.B. Forrest
1972	Dr.E.G. Bradshaw
1973	Dr.J.A.W. Wildsmith
1974	Dr.W.S. Nimmo
1975	Dr.G.B. Drummond
1976	Dr.N.W. Lees
1977	Dr.B.H. Maule
1978	Dr.P.J. McKenzie
1979	Dr.D.T. Brown
1980	Dr.J.H. McClure
1981	Dr.A. Chambers
1982	Dr.I. Armstrong
1983	Dr.D. McKeown
1984	Dr. Colette Clark
1985	Dr.G. Bowler
1986	Dr.R.E. Webster
1987	Dr.A.Lee
1988	Dr.D. Maclean
1989	Dr.A. Murray

HONORARY SECRETARIES OF THE SOCIETY

1950-53	Dr.R.N. Sinclair, Glasgow
1953-57	Dr.A.G. Miller, Glasgow
1957-63	Dr.M. Shaw, Glasgow
1963-67	Dr.A.H.B. Masson, Edinburgh
1967-71	Dr.D. Campbell, Glasgow
1971-75	Dr.W.R. MacRae, Edinburgh
1975-79	Dr.D.S. Arthur, Glasgow
1979-83	Dr.K.B. Slawson, Edinburgh
1983-87	Dr.W.F.D. Hamilton, Dundee
1987-	Dr.P.G.M. Wallace, Glasgow

HONORARY TREASURERS OF THE SOCIETY

1950-53	Dr.R.N. Sinclair, Glasgow
1953-57	Dr.A.G. Miller, Glasgow
1957-63	Dr.M. Shaw, Glasgow
1963-67	Dr.A.C. Milne, Edinburgh
1967-71	Dr.W.L.M. Baird, Glasgow
1971-75	Dr.D.J. Grubb, Edinburgh
1975-79	Dr.D.C. Miller, Glasgow
1979-83	Dr.L.V.H. Martin, Edinburgh
1983-87	Dr.I.G. Gray, Dundee
1987-	Dr.A.D. McLaren, Glasgow

EDITORS OF THE NEWSLETTER

1960-67	Dr.M. Shaw, Glasgow
1967-71	Dr.W. Norris, Glasgow
1971-75	Dr.I.A. Davidson, Edinburgh
1975-79	Dr.D.F. Steel, Paisley
1979-83	Dr.J.A.W. Wildsmith, Edinburgh
1983-87	Dr.W.A. Macrae, Dundee
1987-	Dr.J.C. Murray, Falkirk

SCIENTIFIC MEETING
GLASGOW, NOVEMBER 17TH, 1989

The annual Scientific Meeting of the Society was held in the Kelvin Conference Centre, Glasgow on 17th November. The Royal Infirmary were the hosts and Dr.Brian Maule organised a very succesful meeting, attended by over one hundred people on a bright autumn day. Following a welcome by the President, Dr.J. McG. Imray, Dr. Maule commented on the excellent numbers present and introduced the speakers for a very varied morning session.

After lunch the President took the chair as is customary for the afternoon session, again varied in nature, and later introduced the twelfth Gillies Memorial Lecturer, Dr.W.R.MacRae of Edinburgh. After a wide-ranging and entertaining lecture the President presented Dr. MacRae with the Gillies Memorial Vase, and concluded the meeting by thanking all who had helped to make it another successful Scientific Meeting.

The Gillies Lecture is reproduced in full below following abstracts of the other papers.

PAIN RELIEF CLINICS - ORGANISATION AND RESULTS
Dr. D. Brown

Since Dr. R. Mather started his Pain Clinic for terminally ill patients in 1957, there has been a prolific increase in Chronic Pain Relief Clinics throughout the world. There are various types of clinic from the " ad hoc " arrangement in hospital with no backup services of adequate secretarial assistance or help from records, to the multi-disciplinary clinics prevalent in North America where many specialists diagnose and treat chronic pain syndromes. The intermediate type of clinic, staffed usually by two or three anaesthetists with dedicated sessions and satellite doctors for advice, is a favoured type of clinic in Britain since it offers an efficient service to the patients as well as providing clinical and administrative cover during holidays or sickness in what is a consultant-led service.

All the facilities necessary for an efficient clinic were discussed. Liaison with General Practitioners, District Nurses and Hospice staff is necessary for patients suffering from cancer pain who are seen, treated and discharged from the hospital. Clinics try to adopt a holistic approach to the patient but some inevitably develop particular skills which means they specialise in their own form of treatment. In some clinics, for example, there is an entirely psychological approach to treating chronic pain.

Recommendations for the number of teaching sessions in clinics for registrars before sitting Part III of the Fellowship, and for senior registrars as part of their H.P.T., were made.

Since chronic pain is a subjective experience and transcends traditional medical boundaries, so too do the criteria for success have to be extended and this has led to difficuties in interpreting results. Psycho-social factors might have to be taken into account rather than the traditional ones, such as return to work, since unemployment might be a problem in that area. It is difficult to set up proper clinical trials in clinics since control groups are not possible in what is almost a self-referred group of patients, and inevitably they become their own controls.

The Magill Pain Questionnaire recognises the complex nature of chronic pain extending from pain due to psychological reasons to pain due to an obvious organic lesion and this, together with the recent classification of pain syndromes, will make results more precise.

Some international statistics were discussed to show the difficulties in interpreting results from clinics.

The need to monitor results in the era of the accountant and medical audit was emphasised.

SYSTEMS FOR ACUTE PAIN RELIEF
Dr.G.N.C. Kenny

Pain remains one of the most distressing aspects of many surgical procedures. A variety of therapies have been developed to improve this area of postoperative care but the principal methods involve the use of opioid analgesics. The use of patient controlled analgesia (PCA) allows patients to titrate themselves to their unique desired level of comfort and also provides a method of evaluating analgesic requirements and studying the efficacy of other analgesic agents and techniques.

Weight has been shown to have little influence on the morphine requirements after upper abdominal surgery, whereas age, sex and time of day have major effects on patients' analgesic requirements. Supplementary non-opioid analgesics can provide a useful morphine sparing effect which leads to less increase of arterial carbon dioxide tension and improved pain scores after surgery.

Playing a tape recording of positive suggestions to patients undergoing abdominal hysterectomy such as "any pain you feel will not bother you" has been shown to significantly reduce the requirements for postoperative analgesia. This observation may have many implications in the intraoperative management of patients undergoing surgery.

Improvenents in monitoring techniques should increase the safety of PCA and new methods of delivering analgesic agents such as alfentanil may

provide better quality of pain relief by improving the response time of PCA systems to patient needs.

THE CONTROL OF PROPOFOL CONCENTRATION
DR.M.WHITE

There has, in recent years, been a surge of interest in the technique of intravenous anaesthesia and the pharmacokinetic profile of propofol makes it especially suitable for this purpose.
The complexity of the mathematics which describes the pharmacokinetics of the drug and the inflexibility of manual infusion regimes underlie the approach of delivering the drug under computer control. We have constructed a computer aided infusion device based on the Atari 1040ST microcomputer interfaced with the Imed 929 infusion pump driven by software incorporating a 3 compartment pharmacokinetic model, working in real time.
The device permits the attainment of a target drug concentration in the blood by a rapid zero order infusion. Once this target has been achieved it can be maintained indefinitely. The anaesthetist at all times has the option of manipulating drug concentration in any direction, in response to changing anaesthetic and surgical requirements.
Such a device greatly simplifies the technique of intravenous anaesthesia, and allows the anaesthetist to use the infusion agents in a manner similar to the use of a vapouriser when using inhalational agents.
The results of a study to evaluate the pharmacokinetic performance of the system were presented and the development of a compact portable derivative of the system based on the Psion II Organiser interfaced with the Ohmeda 9000 infusion device reported.

ANAESTHETIC ASSISTANTS - A SCOTTISH SURVEY
DR.J.C.MURRAY

Assistance for the anaesthetist is a matter which affects each of us directly every working day. The value of trained help is unquestionable, and the College of Anaesthetists, the Association of Anaesthetists and other bodies very strongly support the view that a trained assistant should be present on every occasion when an anaesthetic is being administered, in every location, day and night.
Informal contact with colleagues throughout Scotland, and the recurring discussion about anaesthetic assistants at the Annual General Meeting of our Society would suggest that the standards promoted by the College and other bodies are not being attained in every situation. A survey was therefore carried out to determine the position of assistance for the anaesthetist in Scotland. A questionnaire was sent to 31 Divisions of Anaesthesia/Hospitals identified from the records of the Society, and 28 completed replies were received.
The questionnaire sought information on whether a trained assistant was present on every occasion when an anaesthetic was given, how many were given without a trained assistant, which grades of staff supplied the assistance and who was in day to day charge of the anaesthetic assistants. Information was also sought on the training undertaken by the assistants, whether the present arrangements were perceived as satisfactory and what the greatest problems were. Finally views were sought as to whether better training should be made available at a national level.
The results were presented which confirmed the impression that, while a small minority of units had a satisfactory system of trained assistance, the majority failed to provide the standard of assistance which should be expected. Insufficent numbers of staff and inadequate training were common features and there was widespread support for better training at national level for nurses and O.D.A.s.

THE EPIDEMIOLOGY OF INTENSIVE CARE - ONE UNIT'S EXPERIENCE
DR.W.G.ANDERSON

The triumphs of twentieth century medicine have come largely from the application of science in increasing measure to the abnormalities exhibited by individual patients. Epidemiology, the science of counting phenomena and their frequency, has until the last ten years been kept at arms length from individual patient care. It is now clear, however, that many clinical decisions can only be taken in the light of epidemiological data and how one unit has gone about acquiring that data was shown. The Royal Infirmary ITU began in 1962 and we have in the unit some information on every patient treated since then. At first manual methods were used but in 1983 we installed a computer network which among other things collected information on work load and outcomes. Last year we agreed to take part in the ICS Apache study and about the same time newer, more flexible database packages were becoming available and so to exloit these opportunities and assist in processing the huge amounts of data needed for the study we installed a new computer and database.
Also in this period we have seen the arrival of managers and accountants who ask questions not only about workload and outcome but also about resource utilisation and the value of the work done. The computer system helps develop data which can in part answer some of these points and illustrative examples were given.

THE USE OF THE FIBRE OPTIC LARYNGOSCOPE
DR.J.KINSELLA

The use of the fibreoptic bronchoscope to aid tracheal intubation was described in the UK in the early 1970's. This technique was a development of the

practice of using bougies, passed blindly, to guide the passage of the ET tube. The use of fibreoptics has increased with the availability of purpose built fibre optic laryngoscopes.The indications for the use of the fibreoptic laryngoscope are anticipated difficult intubations in which alternatives to intubation cannot be employed. As the clinical observations and investigations available to predict difficult intubation are unreliable the most common indication is previous failed intubation. Relative contraindications include patient refusal, bleeding diatheses and need for tracheostomy. Many alternative methods have been described on awake, sedated or anaesthetised patients using the oral or nasal approach with a variety of local anaesthetics, drying agents and sedative or anaesthetic agents. The principal requirement is for a comfortable, preferably amnesic patient who does not become hypoxic, obstruct the airway or have an excess of secretions. Failures relate to obstructed view, narrow airways and complications such as bleeding. More widespread use depends on training and the maintenance of skills once learnt.

ANAESTHETIC MANAGEMENT OF PRE-ECLAMPSIA

DR.W.T.FRAME

Pre-eclampsia/eclampsia remains a major cause of maternal morbidity and mortality. Indeed, hypertensive disease of pregnancy was the second largest cause of maternal death in England and Wales during 1982-84 and accounted for more than 10% of all maternal deaths (25 out of 243).

As many pre-eclamptic patients require regional or general anaesthesia during their confinement, correct anaesthetic management can contribute to a reduction in overall mortality.

One particularly alarming trend which was emphasised in the latest Triennial Report into Maternal Deaths in England and Wales was the increase in the number of cerebrovascular deaths in pre-eclamptic patients. This is due to inadequate blood pressure control during pregnancy and it is now clear that anaesthetists, with their skill and expertise in pharmacological manipulation of the cardiovascular system and in cardiovascular monitoring, should become involved earlier in the management of these patients.

A wide range of drugs has been used in an attempt to control the hypertension in the pre-eclamptic patient but, at present, there is a trend towards the use of labetalol and nifedipine, singly or in combination. Both these drugs are known not to harm the foetus because, although they decrease the blood pressure, they cause vasodilatation and hence uteroplacental blood flow is not compromised.

With regard to the anaesthetic management of pre-eclampsia the major controversy for many years was whether or not epidural analgesia was indicated. The main concern was that epidural blockade would reduce the blood pressure and hence endanger the foetus by decreasing placental blood flow. However, it is now well established that, provided blood pressure is not allowed to fall precipitously, epidural analgesia actually increases intervillous blood flow in pre-eclamptic patients. Therefore, in the absence of contraindications such as coagulopathy, epidural analgesia is positively indicated both for pain relief in labour and for operative delivery should this become necessary for obstetric reasons.

If delivery is to be expedited by emergency Caesarean section, general anaesthesia may be required and in this situation it is mandatory to take steps to obtund the hypertensive response to laryngoscopy and intubation which is grossly exaggerated in these patients. Failure to do so may result in maternal cerebrovascular accident or left ventricular failure. In the few obstetric units which posses facilities for invasive cardiovascular monitoring nitroprusside and nitroglycerin have been used successfully. For the rest of us, intravenous labetalol in a dose of up to 1mg/kg or fentanyl (4-8 ug/kg) given pre-induction produce consistently satisfactory results.

Finally, it is important to remember that anti-hypertensive therapy and close monitoring of these patients should continue for at least 48 hours post-partum. If the clinical condition of the patient deteriorates anti-convulsant therapy should also be instituted as it is often forgotten that eclampsia can occur with minimal elevation of blood pressure and 25% of eclamptic fits occur post-partum.

GILLIES MEMORIAL LECTURE DR.W.R.MACRAE

"40 YEARS ON"

It is a great pleasure for me to be permitted to give the John Gillies Memorial Lecture. When I look through the list of those who have already given this lecture it is like a walk down a particular memory lane and includes a wide range of distinguished anaesthetists who had at various times of their careers worked with the great man. However it was inevitable that in time this line would be broken - for I did not work with him. Indeed when I went to see him about a post in anaesthesia he turned me towards Leith Hospital where I joined a happy though small bunch of his supporters lead by the intrepid Leslie Morrison of whom more later.

My main recollections are of John Gillies after his retiral from active practice for he continued to attend meetings and frequently made interesting and telling points. Our main area of common interest was that he and I lived quite close together and I would therefore be summoned after the meetings to run him home. This I was of course delighted to do but his fame was great and he frequently was caught by the Fellows of the Edinburgh Royal College of Surgeons, where our meetings were held, for some short discussion or social event. I was then destined to wait quietly around until he was able decently to escape for home – usually full of apologies for the delay!

I then remember John Gillies as a quiet, modest man who one would not have thought would have achieved the many milestones that he had in his life. We are fortunate in having in the Newsletter of the Scottish Society of 1972 an opportunity to read the life of the man – written by himself, in a presentation called "Retrospect". Entering Edinburgh University in 1913 at the age of 18 he left for the Great War in August 1914 and did not re-emerge until the end of 1918 by then endowed "with but one consolatory worthwhile asset - a mature knowledge of mankind which would have taken twenty years of civil life to acquire". He completed his medical training in the accelerated time of four years. During this time he served his apprenticeship in anaesthesia, the equipment being either gauze covered open ether or the chloroform mask, a drop bottle, a screw wedge with which to open the patient's mouth, tongue forceps and an oral airway.

He went to Cumberland Infirmary in Carlisle for a paid post as House Physician and then in 1924 joined a three doctor general practice in the West Riding of Yorkshire. He continued to administer some anaesthetics in his general practice but the draw was obviously there. He visited London where he met John Hunter and Ivan Magill amongst others, realising there was much more to be learned in the specialty.

In 1932, the year in which the Association of Anaesthetists of Great Britain and Ireland was formed - he returned to Edinburgh and started work as an anaesthetist in the Royal Hospital for Sick Children and then obtained a further appointment at the Royal Infirmary.

During the 1939-45 war he was very busy with shortages of staff and the opening of Emergency Medical Service surgical units in many parts of the region, designed to deal with the predicted very large number of casualties from the war which mercifully did not turn up in the anticipated manner.

Still during the war, he joined Council of the Association of Anaesthetists, becoming its President and in 1948 was a founder member of the Board of the Faculty of Anaesthetists of the Royal College of Surgeons of England.

His Presidency of the Association of Anaesthetists was for a three year period, 1948 / 1949 /1950 and it is the middle of these three years that I have used for my title of "40 years on".

In his "Reflections", John Gillies referred to the "Musketeers" - three resident anaesthetists appointed to Edinburgh Royal Infirmary - Drs Morrison, Wheeler and McKinlay. I mention these names because one of them Dr Leslie Morrison was the senior anaesthetist in Leith Hospital when I began my anaesthetic career in 1958 - which I note is now 31 years ago. I have been grateful to Leslie for many things in my life but I am particularly grateful to him now as he has given me great help with the preparation of this lecture. May I say that he does not know this as he is languishing in the Elyssian fields of southern Australia.

The Journal "Anaesthesia" was started in 1946 with as its Editor Dr. C. Langton Hewer and as its Scottish representative Dr John Gillies. This slim Journal, published infrequently makes quite fascinating reading in its early volumes - as it does today - but I am referring to a particular period in history. In it I decided to look to see the publications of the great man. Of course, in those days the amount of published material was mercifully much less than it is today. However, my eye was drawn to a particular article by John Gillies - partially because of the inherent common sense contained in the article - but also I have to admit because it contained a page of five cartoons drawn by - and I am sure you can guess - one of the Musketeers, my old tutor Dr Leslie Morrison. It refers to the volatile agent beloved particularly of the Scots - chloroform - one which did not cease its use in the Royal Infirmary in Edinburgh until the retiral of Dr Griffiths, or Griff as he was much better known, an arch collaborator of Dr Gillies in the field of induced

hypotension.

I have therefore chosen to base my presentation to you today around - with some considerable degree of license - the five cartoons of Leslie Morrison, looking at various aspects of our professional activities which would have interested John Gillies and which remain very topical today.

Teaching purposes

I thought I would begin with one of the stated advantages of chloroform, its value for teaching purposes. The Association of Anaesthetists in 1935 set up the first Diploma in Anaesthetics Examination. The Faculty set up the Fellowship examination in 1954.

In recent years our Fellowship examinations have undergone change - an essential feature of an evolving specialty and the new three part format introduced. I have been involved from the latter days of the old D A examination in the evolution of the Part 1 examination and would like to say a few words about it in regard to what I believe has been its considerable success. It has

"Teaching Purposes!"

examined now some 4,500 candidates of whom approximately 2,100 have passed giving an overall pass rate of 47%. The total figure will of course include multiple attempts by candidates but our studies show that the pass rate of candidates at the first attempt is high and falls off with repeated failures. It is because of this that from this year on candidates will be permitted a total of six attempts. This will include attempts at any of the other sittings of the examination in overseas centres - at the present time Kuwait, Baghdad, Cairo and Riyadh - and will include any attempts made at the Irish Part 1 examination. The sequence will be punctuated by an interview after four attempts as it is the belief of the College that someone failing this essentially clinical examination on four occasions does require some advice.

I believe the Part 1 has achieved its initial aim which was to ensure that young men and women entering the specialty were encouraged to sit down and read and learn something about the techniques and agents they are being taught in every day work. So now we insist our trainees do learn something about the specialty. They are also encouraged through our use of guided cases to think about the material they are presented with. It has been quite fascinating how much their skills in this aspect of the examination have improved in recent years - such is the value of examinations as an instrument of teaching.

So I am sure that Dr Gillies with his background in General Practice would favour this re-emphasis on basic medical skills - the knowledge of medicine on which our specialty is so dependent.

Less explosion risk

Although I am aware that few of the agents we now employ are likely to cause an explosion I thought that I would use this title to take me into the field of monitoring because we have seen an explosion of devices in recent years and I am not sure if all of our colleagues yet appreciate the risks they run if they do not use these devices.

The Faculty, as it then was, had of course laid down broad guidelines over the range of equipment which should be available in a hospital seeking recognition for training purposes. Having it available is, however, a long way from having it actually attached to the patient in the theatre - and even in the anaesthetic room. The Association of Anaesthetists' committee

"Less Explosion Risk!"

under the chairmanship of Professor Tony Adams of Guy's Hospital worked very hard to create realistic recommendations. It is really quite strange how difficult it is to remove the "Biggles" image from anaesthetists - and I am referring to the young - who may not know who Biggles was - as well as to the more mature anaesthetist. We would not be too enthusiastic if we were invited to fly with an airline in which the pilots had no instruments to tell them what was happening - or perhaps even worse who did not bother to switch them on! Yet all too often we see our colleagues happy to anaesthetise a patient on a proverbial wing and a prayer. Excuses for this action abound but they should not be accepted. The nurse or the ODA when preparing the patient for you can attach the ECG leads, the blood pressure cuff and a pulse oximeter so that when you arrive your valuable time will not be wasted as the patient will already be wired up. This can be done as readily on a list of D & C's or day case cystoscopies as it can for major cases. Time is not wasted if it becomes a routine, it is purely an organisational problem. A lack of equipment is

another poor excuse. I accept that monitoring equipment is expensive but it is essential to put a strong case - in writing - to your administrator. Frequently money will suddenly become available when the matter resides in the files of the administrator. We must insist on a time scale whereby each hurdle - the theatre, the anaesthetic room and the recovery ward being adequately equipped - is passed. The interesting thing I find going round the country visiting hospitals on College business is that it is usually in the so-called centre of excellence, the teaching hospital, where deficiencies occur. District General Hospitals are in the main very well equipped and cannot understand why they are being questioned on the subject.

I have spent some time on the Association monitoring document because I believe it is a vital publication. There will soon be a need to tighten the screws a little further but it is a matter of careful judgement when it is correct to act. It is now a year since the document was released and it is quite remarkable what has been achieved in such a relatively short time. E E C countries are also moving forward in the laying down of standards of monitoring. Similarities in the documents available on the Continent to our efforts are reassuring.

Still even that is not the end of the story. We are in the process of outlining - again on the basis of the analogy with airline pilots - a document on the use of checklists to ensure the safe working of our equipment. This is still at the draft stage and is introducing for the first time into checklists the value of the oxygen analyser in the line as a check to ensure that the gases delivered to the machine contain at least some oxygen. We hope this document will be out in the New Year.

Expressed wishes of the surgeon

I have taken this to indicate in a specialty which has largely developed due to surgical needs, the pressure put upon anaesthetists by surgeons to provide services, and the resultant pressures which have developed because of the need to ensure that our young men and women have reasonable career prospects.

In the days of John Gillies entering the specialty, few problems of overstaffing existed. Most doctors were expected to be able to administer some kind of anaesthesia but fortunately due to the work of John Gillies and his contemporaries this is now largely a thing of the past.

Surgical teams are staffed in order to provide sufficient numbers to deal with outpatient clinics.

"Express wishes of Surgeon!

When it comes to theatre days there seems to be an endless stream of young surgeons anxious to operate and thereby to prolong the length of the lists.

Anaesthetists are however all too often staffed one to each theatre. This may be to some extent, a self inflicted wound. As we have developed our out-of-theatre duties, in intensive care, in obstetric units, in the management of chronic pain, we have done so initially in spare time but increasingly in time previously spent in theatre. This has resulted in the thinning out of the anaesthetists in theatre, with additional pressures being placed on those who are most malleable - the trainees. One of the most important matters which is undertaken by our College is the inspection of hospitals for training. This responsibility within the College falls primarily upon the Hospital Recognition Committee.

The duties of the Hospital Recognition Committee include a responsibility to ensure that excessive thinning of consultant staff in this way does not have an adverse effect upon the trainees. This is not to say that a trainee can never be left on his own - our specialty is essentially a very practical one and experience must be bought as well as taught. However in some hospitals consultants have a tendency to forget that they can still teach trainees many things by being in theatre with them. This two way interface is of inestimable value to both consultant and trainee alike and all too often it fails to happen because the consultant forgets the importance of the action.

The corollary of this situation is of course the consultant who has moved out of theatre all together seeing interesting patients in the clinic of his choice. There then arises a need to expose the trainees to the skills inherent in the newly created specialty and this has further implications for staffing levels.

Now in case you think I have been hypercritical, please understand this is not so. No progress would have been made in many of the specialist areas in which anaesthetists make a very significant contribution if this had not been done. The enthusiast has a vital place both for the good of the patient and for the continuing development of our and other specialties. However, I do believe that we have to stand back from time to time and review the situation so that we can see that there is not an undue strain being put on one part of the service because of greater interest at a particular time in some new aspect of medical care. We must try to ensure that the main components of our service are provided for and ensure that as developments out of theatre occur we persuade our administrators of the need for the service and not simply go blindly ahead on our own. The College through its HRC tries to reconcile all these competing interests.

Many centres dread the arrival of the latest visitor from the College seeing it as being likely to result in criticism on various grounds. From the College end we are prepared to chide when we believe it is necessary but we are also most anxious to help by bringing pressures to bear on administrative circles to ensure that the staff and the tools required are made

available. If surgical staff and demands have increased there must be more anaesthetic presence. All too often the funding for some new service is provided but funds for anaesthetic resources are impossible to find. While I realise that many changes would not have occurred in our and other specialties unless additional work was taken on without funding there is a limit to how far this can go. A good test then is whether the consultant staff are themselves prepared to accept the clinical load without additional sessions. If so, the change is probably justifiable. If the end point is simply more strain on the trainee - this is not acceptable.

More relaxation

I have used a considerable number of muscle relaxants over the years and I recognise the value of the muscle relaxant as a useful tool for improving your curriculum vitae. However, I see muscle relaxation in a different way. If you can run your anaesthetic services efficiently then there will be more time for all members of your staff to indulge in muscle relaxation - by having more time to themselves or perhaps, as important, they will be able to do their work more efficiently and more patients will be treated for the same amount of muscular and other activity.

What has been done on these matters in recent years?

"More Relaxation"

I would commend to those of you who either hold posts with administrative responsibilities or those who aspire to do so to consider the booklet entitled "Consultant : Trainee relationships - a guide for consultants." This booklet was produced as a result of a prodigious amount of work done by the Junior Anaesthetists Group of the Association of Anaesthetists in a Working Party under the chairmanship of Dr Philip Helliwell. Its aim is to ensure that those achieving the heady position of power remember their origins. No longer should they say - "we worked long hours inefficiently and so must the young". The demands put upon our young colleagues nowadays become greater every year.

Medical knowledge advances, resulting in many more investigations having to be done, the results assessed and the necessary action implemented. Intensive care units with modern intervention techniques and minute by minute control of cardiovascular, respiratory, renal and hepatic systems are an obvious example. Furthermore, support within the hospital from non-medical staff has changed. No longer does the senior Ward or Theatre sister protect her young doctors like a mother hen. Now the sister is likely to be of a similar age to the SHO and herself pursuing a dedicated nursing career. There is also the ever present need to look for research projects to improve the curriculum vitae as promotional prospects depend significantly on such matters. Examination work must be fitted in around long hours and some attempt made to maintain a family life. No wonder examination results are not outstandingly good. To help consultants see the picture from both sides, this booklet was produced and I commend it to you.

Secondly I would like to look for a moment at efficiency of working for herein lies the main problem for us all in the future. Funds for the NHS can never be unlimited and we must endeavour to use the very large sums which do come our way as efficiently as possible. As a contribution to this matter, the Association of Anaesthetists jointly with the Association of Surgeons, in consultation with various other bodies, have produced a booklet "Efficiency of theatre services". In this we have tried to identify the factors which we all know slow down the flow of patients through theatres, force cancellation of lists and therefore reduce throughput during the year. By putting these down on paper ourselves, before others do it for us, we hope to avoid many of the pitfalls which occur when those who do not work in theatres give the matter a superficial glance and come to speedy and usually quite wrong conclusions. We know where the problems lie and only we can in the end rectify them.

Less Haemorrhage

You would no doubt be very surprised if I did not

refer to the subject of induced hypotension. This subject is after all synonymous with the names of Griffiths and Gillies. I have left it to the end for I cannot dwell long on the subject but I have chosen carefully two small topics to discuss briefly.

Although the initial work done on controlled hypotension was with high spinal anaesthesia, drugs soon became very popular and it is interesting to note that over the years virtually all of the drugs used have gone, pentamethonium, hexamethonium, phenactropinium, and now pentolinium. Only trimetaphan (Arfonad) and sodium nitroprusside have stood the test of time although labetalol has remained much longer than I would have thought.

It is reassuring to see another drug or perhaps two drugs coming on the scene. I refer to ATP and adenosine. As ATP is rapidly converted to adenosine in the body I am not sure if it is one or two. I do not have time to go into adenosine in any real detail but it does seem to be interesting. As usual we find it is not a new drug for the purpose of inducing hypotension as it has been used in Japan since 1968 for the purpose but it is relatively new to the Western world. The main reason its value has not been better assessed has been that most of the literature on the drug is written in Japanese and the translations we have been able to get have little clarified the situation. It is now receiving a considerable amount of attention and articles are appearing in our literature. The features of an ideal hypotensive agent are well known. Quick onset and recovery, no effect on baroreceptor or renin/angiotensin and no toxic effects. Adenosine is quick in onset, rapid in recovery, appears to have an effect on slowing pulses and does not seem to encourage the release of renin. Furthermore, to the present time at least, it does not seem to have much in the way of undesirable side effects. It can produce arrhythmias in rats and may increase uric acid levels in patients with gout but these seem to be relatively small problems. It will be very interesting to see how this drug does stand up to the rigours of modern day usage and the ubiquitous yellow card, which in practice often turns out to have an effect nearer to the red card in football circles. It is perhaps merely worth mentioning that when sodium nitroprusside re-entered the clinical scene in the late 1960's it was not thought to have any side effects at all and it was some time before the cyanide story began to emerge!

Secondly I would like to look at monitoring and in particular at one of the oldest and most commonly used parameters to be monitored - the blood pressure. Surely everything that can be said on that subject has now been said. Well, I believe that this may not be so, for I wish to discourage the use of automatic blood pressure recorders for the measurement of blood pressure during induced hypotension - especially when potent, short acting drugs are used. These clever machines operate by giving a first approximation of blood pressure, followed by a more detailed and accurate assessment over successive readings. They do not give "real-time" measurements and when blood pressure changes rapidly this is very unreliable. Unfortunately, like man's best friend, the dog, they wish to please. Instead of indicating their dismay they display a reading which may keep the anaesthetist happy but which is most unlikely to relate in any way to the actual situation within the patient. As seeing trends in blood pressure movement at this time is a vital factor in planning appropriate drug dosages this is not only unhelpful, but is frankly misleading.

Please remember I am not referring to the relatively minor under and over readings which occur at extremes of blood pressure which can be compensated for in the mind of the experienced anaesthetist.

If you are going to measure blood pressure in these circumstances - please, use the oscillotonometer if you must, and if you can - but what is wrong with putting in an arterial line? Morbidity is minimal and lowering blood pressure is a form of physiological trespass which merits such intervention particularly nowadays when monitors are readily available and used for so many clinical situations.

"Less Haemorrhage!"

Conclusion

So, I have cheated by misusing the cartoons of Leslie Morrison to permit me to range widely over a number of topics which have interested me over the years. I have no doubt that they would all have been of interest to John Gillies. He cared for his staff, he sought the holy grail of safety, he tried to improve standards, he took part in examinations and of course he developed techniques. We who come after and who try to follow in some of his footsteps see how much more difficult it was for him. Our specialty was still in its infancy, transport and communications were limited, resources were scarce, anaesthetic technology as we know it today was little developed. We have moved further down the road that he indicated and I am quite sure that were he with us still he would have been deeply involved in all facets of our work, encouraging, cajoling and forcing us to stretch our abilities and our capabilities to the limit.

NEWS FROM THE REGIONS

SOUTH EAST REGION

Royal Infirmary of Edinburgh

Professor Alistair Spence continues as Vice-President of the College of Anaesthetists. Dr.W.R.MacRae is Honorary Treasurer of the Association of Anaesthetists. He delivered the Gillies Memorial Lecture to the Society in November, and he serves on the Council of the College of the Association.

Dr.A.H.B.Masson retired from the Royal Infirmary and has been replaced by Dr.Anthony Pollock. His position as Consultant with Administrative Responsibility has been taken over by Dr. Calvin Hider. Dr. Masson maintains his contact with the Department in his role as Honorary Archivist, Royal College of Surgeons of Edinburgh. Dr.Alistair Chambers resigned from his consultant post based at the City Hospital to take up a consultant post in Aberdeen with an interest in pain relief. His post is currently covered by Dr.A.Lee as locum consultant. Drs. Jonathan Phillips and John Duggan were appointed to consultant posts in Wolverhampton and Ashington. Drs. Ken Stewart, Simon Rowbottom and Mike Brockway have been appointed Senior Registrars, and Dr. Lachlan Morrison has been appointed the Astra Research Fellow. Dr. John Lew is overseas in Hong Kong for one year. Dr David Brown won the Department's annual golf competition in appalling conditions at Crail in September.

Western General Hospital

Following the closure of Bruntsfield Hospital additional paediatric and gynaecological surgery was transferred to the Western. Dr. Jimmy Wilson is covering these three anaesthetic sessions. Dr. Mark Dearden has been appointed a part-time Senior Lecturer in the University and together with Professor Miller is joint holder of a current MRC grant for research into the care of head injuries. Dr. Dorothy Child has developed a domiciliary respiratory care service for quadriplegics from Edenhall hospital.

In **West Lothian** St. John's Hospital at Howden opened for patients on October 30th. Staff and equipment commissioning, together with training, are running in parallel with clinical work. New equipment and premises have provided many headaches but the team is settling in well and optimism is now replacing frustration. The Plastics and Burns Unit remains at Bangour General Hospital and is expected to move to St. Johns in 1992. Dr. Jane Chestnut has been appointed to a new consultant post and Drs. Sutherland, McDonagh, Beattie, Murray, Ramage and McKenzie joined the junior staff. Dr. Ann David has become the first incumbent of a full-time Senior Registrar rotation post. The junior staff numbers have been increased to allow cover for the two sites. In September Dr. Sally Edwards took over as Chairman of the Medical Staff Committee and Secretary of the Lothian Division of Anaesthesia. Dr. W. Brown is the CAR and Dr. Chestnut is the Association Linkman, and Dr. Small continues as College Tutor.

At the Victoria Hospital, Kirkcaldy, there have been no changes of staff. Dr. R. Bowie is President of the Edinburgh and East of Scotland Society of Anaesthetists. He has completed his appointment as College Tutor, and Dr. Jennifer Meek has been nominated as his successor.

HIGHLAND REGION

As anticipated in last year's Newsletter there has been significant expansion in the staff at Inverness. Dr. Alisdair MacNeill was appointed to a new consultant post in May having completed his Senior Registrar training in Aberdeen. We are delighted to welcome him back. Dr. Dale Deacon and Dr. Neelam Thomas have been appointed to full-time Associate Specialist posts, Dr. Deacon replacing Dr. Angus Martin and Dr. Thomas promoted from part-time registrar. As a result the full-time registrars are now able to enjoy a slightly less demanding lifestyle workwise.

After many months of negotiation a Senior Registrar rotation between Tayside and Highland Region has been achieved. This is for a trial period but so far there are very positive vibes and it is hoped that the two way benefit will be maintained and progress to a permanent basis.

We said farewell to Dr. Malina Sathananthan in July after three years stalwart service and her place has been taken by Dr. Christopher Trotter.

Outwith the Inverness department Dr. Andrew Hothersall has been appointed to the consultant post in the Western Isles. Dr.D.K. Allison, Limited Specialist in Fort William, retired in July. A loyal supporter of the Scottish Society we wish him a happy retirement. He has been replaced by Dr. Jacqueline Howes as Clinical Assistant.

In Sutherland Dr. Lewis Morrison's sad and untimely death in January and Dr. Michael Simpson's retiral from his anaesthetic sessions have left a practical and political problem. The surgical services there are at last the subject of review by the Highland Health Board and we await the outcome with interest.

GRAMPIAN REGION

The expansion of clinical services in the Grampian Region has led to a further increase in our consultant establishment. Dr. A. Chambers, previously a

consultant in Edinburgh, joined our department in December 1989 and we welcome his continued career advancement. As part of his duties Alistair has a commitment to pain control. Dr. P. Ramayya has returned from Hyderabad to take up a consultant post with some sessions devoted to Medical Informatics. Many of you will remember Dr. Ramayya while he was a Senior Registrar in Aberdeen and secretary of the Intensive Care Society Computing Group.

The Society's Registrars' Meeting was held in Aberdeen on June 9th with the morning session devoted to Protein Synthesis/Metabolism and the varying effects of anaesthesia and sepsis. We were delighted to receive a lecture from Dr. Peter Garlick, Senior Scientific Officer at the Rowett Institute and a world renowned figure in this field of research. The afternoon session provided a more varied range of topics to suit all tastes.

Cardiac surgery in Aberdeen has now reached the first phase of its expansion with about 200 cases/year now being carried out. The second phase of expansion awaits the construction of a new cardiac intensive care unit which we hope will be in two or three years time. Mr R. Jeffrey, previously a Senior Registrar at Liverpool, took up an appointment as a Cardiothoracic Surgeon in Aberdeen in August.

We were delighted to hear that Dr. K. Ferguson (Registrar) has been awarded the British Journal of Anaesthesia Fellowship for a second year for her research into the effects of anaesthesia on protein synthesis.

It was with sadness that we heard of the death of Dr. Lawson Davidson in September. Lawson, who was a past President of the Society, had been in relatively poor health since his retirement in June 1986. The large attendance at his funeral bore witness to the respect he was held in by his many friends and colleagues.

Dr. D.G.Ross (Consultant) was invited to present the intensive care computing system "ABICUS" at a number of international venues in Hong Kong, Japan and the U.S.A.

Finally, new Senior Registrars are Dr.R.C.Rodgers who was previously a registrar at Aberdeen, and Dr. R. Patey who came to us from Glasgow via a climbing tour of the Himalayas in the Garhwal region of India. Final Fellowships were obtained by Drs. A. Ronald, R. Dua and S.Midgley.

TAYSIDE

Dundee is proud to announce that in 1989 five out of its establishment of ten registrars gained the Fellowship of the new College. Congratulations are due to the successful candidates, Drs. Gill Hood, Gerry Keenan, Mick Serpell, Ian Skipsey and Praveen Manthri.

It is befitting that such success should mark the year of the retiral of Dr. Ian Lawson who has done so much to build the department over the years. Dr. Lawson was Consultant in Administrative Charge from 1972 to 1984 and Head of the University Department of Anaesthesia from 1979 to 1989. His long and distinguished career began in Harrogate in 1948, but it was from Liverpool, and later Seattle, that he brought valuable experience. By introducing and developing important techniques, concepts and services he played a major role in the evolution of many aspects of anaesthesia in Dundee. Among a long list of important offices which he held were President of the Scottish Society of Anaesthetists, President of the Association of Dental Anaesthetists, and a number of positions over the years in relation to the Faculty of Anaesthetists and its Standing Committee for Scotland. He was also Gillies Memorial Lecturer in 1987. He deserves credit for all he has done to enhance the status of our specialty and department, both locally and nationally and we wish him a long and happy retirement in pursuit of his many interests.

In March Dr. Iain Gray completed his term as chairman of the Division of Anaesthesia for Dundee and Angus. Despite repeated episodes of illness and surgery, he was a very successful chairman. Rationalisation is Dr. Gray's theme and this he applied with particular merit to the rearrangement of anaesthetic sessions, to the Shaw Report, and now to the theatre administration system on which he is currently concentrating his efforts. By popular acclaim, Dr. Sandy Forrest succeeded to the chairmanship and, as expected, he is meeting the challenge with his usual quiet, tactful and very competent style.

In June Dr. Bill Macrae and Mr. Varma, consultant neurosurgeon, organised the second St. Andrews Pain Symposium on "The Neurosurgical Treatment of Chronic Pain". This particularly successful and very well attended meeting was addressed by many famous speakers from Britain and abroad.

With regard to staff training in Tayside and with particular reference to the Scottish Home and Health Department's document "Hospital Medical Staffing in Scotland", a Specialty Subcommittee for Postgraduate Medical Education in Anaesthesia has been set up under the chairmanship of Dr. Bill Bissett. To provide District General Hospital experience at Senior Registrar level a sixth post has been created in Dundee and a rotation to Inverness has also now been established.

Dr. John Bannister from Edinburgh was appointed to the Senior Registrar post vacated last year by Dr. Neil Morton, and Dr. Moira Simmons joined us from Glasgow to take up the new Senior Registrar post. At S.H.O. level Dr. Ute Goldmann resigned to return to her native Germany and Dr. Cathy Bellamy and Dr. Alistair McDiarmid joined the department. In Perth Dr. Chris Garratt and Dr. Carl Humphries were appointed to S.H.O. posts vacated by Dr. Damien Carson, who was promoted to registrar, and Dr. Sandy

Binning who moved to Glasgow Royal Infirmary.

WESTERN REGION

Glasgow

The last year has been one of uncertainty in the City with the White Paper and the Greater Glasgow Health Board's Strategy Review for Acute Services to digest. The implications for both the training and service aspects of anaesthesia of each of these documents are considerable, but the effects of the two put together are impossible to predict. It is to be hoped that the Departments in the City can achieve some kind of harmony in their response to these proposals. The unenviable task of trying to achieve this harmony is in the hands of Dr. Alan Macdonald and Dr. Robin Marshall who chair respectively the Anaesthetic Subcommittees of the Postgraduate Education Committee and the Area Medical Advisory Committee. On a more social note the President of the Glasgow and West of Scotland Society of Anaesthetists is now Dr. Mike Telfer.

Several well known consultants have retired recently, namely Dr. John Barker from the Institute of Neurological Sciences, Dr. George Dow from Stobhill Hospital and Dr. Bill Jones from the Royal Infirmary. We wish them all a long and happy retirement. The consultants recently appointed are Dr. Heather Hosie, Southern General, Dr. David Duffy and Dr. David Smith both Western Infirmary, Dr. Michael McNeill, Royal Infirmary, Dr. Traven McLintock, Royal Infirmary and Stobhill Hospital, and Dr. Peter Farling, Institute of Neurological Sciences.

Forth Valley

The new Surgical Unit at Stirling was opened in the Spring and appears to have had remarkably few teething problems. Dr.Alec. Laing has retired and been replaced by Dr. Crawford Reid.

After much negotiation Falkirk has secured an additional registrar post under the Overseas Doctors Training Scheme, and the first incumbent of the post, Dr. Hussein El-Abiary, has settled in well.

Also after much hard work and careful planning the new Forth Valley Area Training Scheme for junior staff in Falkirk and Stirling has received formal approval from the College of Anaesthetists. As part of this Scheme a four month rotation to Glasgow Royal Infirmary is included at an appropriate stage in training and this is a welcome development for all concerned.

Argyll and Clyde

Paisley and Inverclyde report no news of note, but Dr. A. Easy has joined the consultant staff at Vale of Leven.

Ayrshire and Arran

It is good to record that Dr. David Eveleigh has returned to work following his car accident. Dr. David Coventry and Dr. Jane Howie, previously senior registrars in the Western Infirmary and the Royal Infirmary respectively, have been appointed to consultant posts as has Dr. Chris Cumming from the Western Infirmary. He replaces Dr. Graham Macnab who retired in April.

Dumfries and Galloway

We are particularly pleased with the progress of our junior staff over the past year. Dr Ewen Cameron, having passed Parts I and II of the Fellowship exam moves on to a registrar post at the Western Infirmary, Glasgow and Dr. Michael Steyn, having passed Part I, was recently successful in obtaining a similar post at the Royal Infirmary.

Lanarkshire

At Monklands Hospital Dr. Edith Pink has retired but as yet no replacement has been appointed. A new research registrar post has been funded and is currently held by Dr. Brian Kennedy.

There have been no changes of note at Law Hospital or Hairmyres.

AUTUMN FISHING OUTING

SKIRMISH AT MENTEITH - AULD ENEMY DEFEATED

A challenge awaited those gentlemen of the Society attending at the Lake of Menteith on the 6th September. Although few could doubt that the fame of this prestigious outing had travelled far, the arrival at the waterside of three colleagues from England was unexpected. The grave demeanours of members and the excessive care with which they assembled their tackle indicated escalation of the event from an individual to a national level. Hip flasks untouched and many a good story left untold, a serious day ended with a meal and refreshment in the Lake Hotel. Attending were Doctors Bill Easy, Nick Gordon, Donald Miller, Don Robertson, Jim Straiton and Professor Donald Campbell. Visitors from Lancashire were Doctors Phil Allen, Steve Holgate and C. Consilio. Jim Straiton won the competition for the largest trout and the heaviest catch and is now the proud possessor of the "Menteith Mug". After elegantly thanking our sponsors, Abbott Laboratories, for their generous support, Donald Campbell, with every appearance of sincerity, commiserated with our visitors on their singular lack of success.

Don Robertson.

GOLF OUTING

The annual golf outing was held at Glenbervie Golf Club on 22nd June during a prolonged spell of dry, sunny weather. Despite this, the course was in remarkably good condition and, indeed, the rough was particularly tough which prompted the suggestion that it had been watered in preference to the fairways.

However, the 17 stalwarts present enjoyed a pleasant day's golf with honours in the morning stableford competition going to Paul Wilson who won the Scott Trophy. Alick Reid was second with the same number of points but a poorer inward half, and Peter Wallace was third. The booby prize was awarded to Bruce Scott - how have the mighty fallen! In the afternoon a free transfer to the East team was given to certain members normally associated with the West, but despite this the East were victorious in three matches with two halved.

The day was rounded off with a splendid dinner in the clubhouse at which the President presented the prizes and thanked John Murray for his organisation of another successful golf outing. He also announced the venue for 1990 which is the Royal Aberdeen Golf Club at Balgownie and the date will be in June again.

EDINBURGH AND EAST OF SCOTLAND SOCIETY OF ANAESTHETISTS

1989

Tuesday, October 3rd
Professor D.C.Carter, Edinburgh University.
"The Changing Face of Hepato-Biliary Surgery"

Friday, October 27th
Dr.P. McKenzie, O.B.E., Formerly Physician Superintendent, Belvidere Hospital, Glasgow.
"From Rags to Riches"
Joint meeting with the Glasgow and West of Scotland Society, Royal College of Physicians and Surgeons, Glasgow.

Tuesday, November 7th
Dr.H. Zeally, Chief Administrative Medical Officer, Lothian Health Board.
"Health and Health Care - Towards 2000"

Tuesday, December 5th
Dr.M.Branthwaite, Consultant Physician, Brompton Hospital.
"Non-Invasive Ventilation"

1990

Tuesday, January 9th
Professor A.R.Aitkenhead, Nottingham University.
"Anaesthesia and the Colon"

Tuesday, February 6th
Presidential Address - Dr.R.A.Bowie.

Tuesday, March 6th
Members Night
Associate Members' Prize Presentation.

Saturday, March 24th
Annual Dinner; University Union, Teviot Row House, 7.30 p.m. for 8.00 p.m.

Tuesday, May 8th
Annual General Meeting

Unless otherwise stated, meetings are 7.30 for 8 p.m. in the Main Hall, Royal College of Surgeons, Nicolson Street.

NORTH EAST OF SCOTLAND SOCIETY OF ANAESTHETISTS

Meetings are held at 7.30 for 8 p.m. in the Postgraduate Medical Centre, Stracathro Hospital, Brechin, unless otherwise notified.

1989

Thursday, 26th October
"Readable, Reliable or Rubbish"
Dr.R.M.Weller, Frenchay Hospital, Bristol.

Thursday, 23rd November
"Cardiothoracic Anaesthesia and Beyond"
Dr.D.W.Bethune, Papworth Hospital, Cambridge.

1990

Thursday, 1st March
Registrars' Papers.

Thursday, 29th March
"Day-Care Anaesthesia"
Dr.T.Ogg, Addenbrooke's Hospital, Cambridge.

Thursday, 17th May
Annual General Meeting and Presidential Address

GLASGOW AND WEST OF SCOTLAND SOCIETY OF ANAESTHETISTS

1989

Friday, 27th October
Combined meeting with Edinburgh and East of Scotland Society of Anaesthetists in Glasgow.
Dr. Peter McKenzie, O.B.E., formerly Physician Superintendent, Belvidere Hospital, Glasgow.
"From Rags to Riches"

Wednesday, 29th November
Air Commodore C.A.B. McLaren, Consultant Adviser in Anaesthetics to the R.A.F.
"The Flying Doctor"

1990

Tuesday, 23rd January
Members' Night - presented by the Division of Anaesthesia, Southern General Hospital, Glasgow.

Tuesday, 20th February
Dr. J.E. Charlton, Consultant Anaesthetist, Royal Victoria Hospital, Newcastle upon Tyne.
"Regional vs General Anaesthesia"

Thursday, 29th March
Presidential Address – Dr.A.B.M.Telfer.
"Man and Machine"

Tuesday, 24th April
Annual General Meeting

Wednesday, 16th May
Annual Golf Outing - venue to be confirmed.

Unless otherwise stated, meetings will be held in the Royal College of Physicians and Surgeons of Glasgow, 242 St. Vincent Street, Glasgow.
Notice of each meeting will be sent to members.

REGISTRAR'S PRIZE

The Society annually awards a prize of 250 pounds for the best original paper or essay submitted by an anaesthetist in Scotland, holding the grade of Senior Registrar or under. A second prize of 125 pounds or a third of 75 pounds may be awarded for other papers of particular merit at the discretion of the assessors. It is not necessary that the Registrar be a member of the Society.

The conditions attaching to the award are as follows:

1. The paper or essay must be original i.e. it should not have been read previously at any meeting or published in any journal. The winning of the prize is in no way a bar to the subsequent publication of the paper in another journal.
2. It is desirable that papers submitted show evidence of personal work, but papers consisting of surveys of the literature are eligible for consideration. The Council of the Society wishes to stress that intending contenders should not be discouraged through fear of their efforts being judged elementary. It is fully realised that junior anaesthetists in some peripheral hospitals may not have opportunities to deal with special types of cases or employ advanced anaesthetic techniques.
3. Papers for adjudication (4 copies) MUST reach the Secretary by the end of February at the latest.
4. The winner of the prize will be required to give a digest of the paper at the Annual General Meeting of the Society towards the end of April. His/Her expenses for the meeting and those of a partner will be met by the Society.

The Secretary places all entries in the hands of the Award Committee which consists of the President, Vice-President and Past President. The members of the Committee have expressed the desire to be able to adjudicate without knowing the name or hospital of the writer; it is requested therefore that the name, address etc. of the entrant be submitted on a separate covering page. This will be retained by the Secretary, but otherwise the essay itself should give no indication of its source. Acknowledgment to colleagues etc. should not be included.

The prize for 1989 was won by Dr.A.Murray of the Royal Infirmary, Glasgow for his paper entitled "Examination of cardio-respiratory stress during upper gastro-intestinal endoscopy".

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