

NEWS LETTER



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THE SCOTTISH SOCIETY OF ANAESTHETISTS

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SCOTTISH SOCIETY OF ANAESTHETISTS

COUNCIL FOR 1982—83

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		Retires
Aberdeen	Dr. W.L. PARRY	1984
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	Dr. A.S. BUCHAN	1985
Glasgow	Dr. J. VANCE	1985
	Dr. A. MELLON	1983
Inverness and North	Dr. J. MACHIN	1983

PROGRAMME FOR 1983

REGISTRAR'S PRIZE: Entries to be submitted to the Secretary by 28th February 1983.

ANNUAL GENERAL MEETING: The Hydro Hotel, Peebles, 15th-17th April, 1983.

REGISTRAR'S MEETING: Aberdeen, May 1983.

SCIENTIFIC MEETING AND GILLIES LECTURE: Glasgow, November 1983.

President's Newsletter



Photo: Dr W.R. MacRae

One of the outstanding events in the year's anaesthetic calendar was the 6th European Congress of Anaesthesiology held from the 8th to 15th September at the Royal Festival Hall in London. This most impressive occasion, enhanced by the beautiful autumn weather and the spectacular Thames-side locale brought together anaesthetists from all over the world. The formal papers ranged widely across our speciality, the informal conversations renewed many old friendships and formed several new ones. It was an exciting and stimulating week, and I am glad to have been able to attend. This I was able to do, only because my colleagues in Inverness were generously covering my work during my absence - no slight imposition in a small department like ours. There must have been many other participants in a similar position, so when we attend meetings or comment on their success, perhaps we should bear in mind the contribution of the chaps who remain at home to do the work.

The Congress venue was felicitously chosen, coming as it did to London in the year in which the Association of Anaesthetists celebrates the fiftieth anniversary of its founding. Our Society is happy to acknowledge this important anniversary, and notes with pleasure the position of influence and high prestige which the Association now holds. We extend our greetings and our congratulations.

Current anaesthetic thinking has received a salutary jolt this year by the publication of the report edited by Professor Mushin and Dr Lunn on Mortality associated with Anaesthesia. This document shows us having a critical look at ourselves and at our results. Within the profession and among the public there has recently been a tendency to regard modern anaesthesia, with its sophisticated equipment and diversity of drugs as wonderfully safe. This report reveals, that, while in large measure this is so, there is certainly no room for complacency, and some disquieting facts have come to light. One salient point has emerged, and it is worth emphasising again and again. It is the anaesthetist, not his drugs or his equipment or his assistance, that determines the safety of the procedure. This thought should sustain us equally whether we are engaged in the role of negotiator discussing matters of importance to the future of our speciality, or on a personal level - even on those grey days when all seems dull and tedious routine.

This theme of critical appraisal of our current practice is further manifested in two meetings held in Edinburgh this year. The first of these was the Inaugural Meeting of the European Society of Regional Anaesthesia, in which our Vice-president Dr Bruce Scott played such an important role. The resurgence of interest in regional anaesthesia is very

timely, following on the introduction of the newer and more potent local anaesthetic agents. It provides us with yet another stimulus to pause and wonder if much of what have become our routine techniques over the last couple of decades really is the best we can do. The other meeting was the Scientific Meeting of our own Society in November this year, when the theme was post-operative pain. I do not think that any of us are really satisfied with our management of this, but it is not nearly such an easy matter to deal with as one would at first think. There are practical difficulties and logistic problems to be overcome - many of them with staffing implications.

The Society is grateful to our colleagues in the Glasgow Western Infirmary for their excellent work in organising the Registrars' Meeting. I was unable to

attend, for this time it was my turn to stay at home, but our registrars were loud in their praise.

Our meeting in Aviemore seemed as successful as ever, combining admirably professional and social interests. We were fortunate in our guest speaker, Professor Norman. He was both a thought provoking speaker, and, together with his charming wife, a pleasant and energetic guest in the social moments. I have referred to the Scientific meeting above, and our thanks to all involved for another high quality meeting.

Finally, it goes without saying, but I should not like it to go unsaid, that our Society is well served by its more permanent office bearers. It is my pleasure to acknowledge their unobtrusive efficiency.

Editorial

This edition of the Newsletter marks a time of change for the Society. The most significant change is the new venue for our Annual General Meeting. After eleven consecutive meetings at the Post House, Aviemore we are moving to the Peebles Hydro Hotel. This is a change that has been arranged at the request of a large part of the Society, and approved by an even larger section in the ballot that was held. It is vital that a significant proportion of the membership, with their families, spend the weekend in Peebles if the meeting is to be a success. Peebles is close enough to the larger centres of population to make the return journey a convenient possibility in one day. Your council hope that that will not happen because there is more to the A.G.M. than the business and scientific sessions. The Hydro (and Peebles as a whole) has much to offer us, much of it at **no** extra cost and we look forward to your support.

The second change is the regular four yearly retirement of the Society's Office bearers. We leave office with the usual mixture of relief and regret, and with our thanks to the Society for allowing us to have been of service. We would assure our successors that four years have passed by very quickly and that we have enjoyed it immensely. We are still puzzled that no-one noticed that we are all

english!

One matter that does not seem to change is our concern with the regulations on reporting Deaths in association with Anaesthesia, but even that may be changing. New regulations are currently being drafted that should result in Anaesthetists being treated in exactly the same way as our colleagues in other specialties and without specific regulations being directed towards us. In recent years most of the negotiating has been done by Alastair Masson and our thanks are due to him.

This last editorial gives me the opportunity to thank all those who have contributed to the Newsletter in the last four years. I would like to thank its printers Econoprint for their friendly, helpful service, my wife for her assistance and in particular those who have provided photographs, because these make a great difference to the appearance of the Newsletter. Many members take pictures at meetings, especially the A.G.M., so let's have even more submitted (we **can** use colour photos). Perhaps we might persuade the Treasurer to provide a prize for the best each year. Finally all good wishes to Bill MacRae who has (I hope!) agreed to take on the Newsletter for the next term.

Annual General Meeting — Aviemore

30th April — 2nd May 1982

The 1982 Annual General Meeting was the eleventh successive one to have been held at the Post House, Aviemore. The attendance was up on the previous year, but again we did not completely fill the hotel. Such are the facilities of the Post House that the intrusion of other guests made it even less suitable for our needs. Even if we do not fill the Peebles Hydro, although it is hoped that all will do their best to ensure that we do, its facilities make that much less of a problem. We had been promised better conference facilities at Aviemore when we discussed

matters with the management in 1981, but it transpired that no alterations had been made, so the speakers fought their usual valiant battle with 'noises off' from the kitchens.

The weekend followed its usual pattern and accounts of the papers that were presented follow below. Socially as well as academically the meeting was a great success. Our friends from the trade presented prizes for the sporting activities, and these went to Robin Allison and Connie Howie for Golf and Donald Campbell for fishing.

PRESIDENTIAL ADDRESS

Dr. A. BOOTH

THE FLYING DEATH—A CATALYST

It is virtually one of the tenets of our faith that the introduction of the relaxants was one of the most important factors in producing modern anaesthesia and I need not labour the point or elaborate on it. What I would like to do is to direct your attention to the role that the relaxants played in producing the modern specialty of anaesthesia, and placing it in its current prestigious position alongside the major specialities of medicine. Many factors have been involved in this process, not all of them of our doing — progress and change were all around — and not all of them clinical or even medical. Ranking high among these factors is the way in which we have been able to enlarge our sphere of service to our colleagues in other disciplines. We have enlarged this so widely now that there is hardly a speciality with which we are not involved at some time or other, or to which we do not render some service or help. This expanded influence can be traced fairly directly back to the introduction of the relaxants.

It is interesting to think back to why the relaxants came into use at all. The answer is quite simple: as an aid to the anaesthetist in producing muscular relaxation with greater ease and convenience to himself. All the subsequent developments were pure chance. All the things which we would now enumerate as advantages of using relaxants were purely secondary and fortuitous. They were not in the minds of the first users and indeed could not

have been foreseen. The famous paper by Griffith and Johnson¹, telling of the introduction of curare, shows all this quite clearly.

Their attitude was that curare would probably be a useful answer to an irritating technical problem. In no sense was it anticipated that it would displace any of the general anaesthetic agents in use at the time, but it was worth looking at! In the light of future events they made the interesting observation that they had not seen any serious depressant effects on respiration, pulse or blood pressure. They were prepared for this to occur, but with means of resuscitation available, did not fear these complications. That is significant for because at that time most anaesthetists did fear respiratory depression.

They pioneered the use of curare, interest grew, more users were attracted and the relaxant era was born, but the emphasis was still on the value of being able to produce relaxation quickly and easily. The advantage to the patient of being able to reduce the quantity of general anaesthetic — if thought of at all — was just a secondary and pleasant bonus. McIntosh, gave just a hint of this secondary benefit in the phrasing of his description² of how he and Mushin tried out this new drug and in due course the beneficial effect to the patient of being able to "Economise on the ether" assumed more and more importance in the thinking of the anaesthetists of the time.

It must not be imagined that curare burst upon the anaesthetic scene so that instantly every one was using it, for Griffith and Johnson had sounded the warning of its potential danger.

There was debate about which preparation was the best to use because there were difficulties in obtaining pure and standardised preparations. This was a time of evaluation; of exploration; of experiment. This was a new substance quite unlike any other agent that had been used before and, given the pharmacological and physiological knowledge of the average anaesthetist of the day, problems were bound to arise. The plain fact was that many did not realise the implications of what they were doing. John Halton³, talking during the discussion of the papers on "curarisation" at the Royal Society of Medicine in April 1947, indicated that anaesthetists should learn a whole new concept of drug administration and aid respiration from the moment of injection until the effect had worn off. He pointed out that the latter might not coincide with the termination of the operation and there is the clue to a great deal of the trouble that was ascribed to relaxant use.

It is necessary to cast our minds back to conditions of that time to appreciate it fully. In those days the anaesthetist spent little time with the patient during recovery. Frequently, you had started the next anaesthetic before the final stitches in an attempt to minimise the time between cases. This was quite acceptable practice! There were no recovery rooms, and little recovery space so that anaesthetic supervision and the operation usually did terminate together. Nor was it by any means universal practice to reverse with neostigmine such relaxation as had been obtained, so shallow post-operative respiration following inadequate respiratory exchange during surgery was — as we can so easily realise today — a sure recipe for trouble.

But we must not contemplate their performance with too much amused superiority. The effects of under-ventilation were just not appreciated at that time. The research worker and the physiologist in his lab no doubt knew all about it, but the ordinary anaesthetist struggling to get through a long list of cases did not. All that he cared was that this curare made it easier to get good relaxation since on your ability to do that was your reputation as an anaesthetist largely dependent.

The full value of the relaxants did not emerge until anaesthetists learned to ventilate patients properly.

This in turn, followed on the use of a dose, which, either by itself, or in combination with the general anaesthetic agent, produced apnoea. Nowadays apnoea is virtually our stock in trade, and it is difficult to project our minds back to those times, but the ordinary anaesthetist was most unhappy about apnoea, and took it very seriously. I recall on one occasion in 1952, when I was an SHO at Aberdeen Royal Infirmary, that I had been asked to start off the list for a consultant. I had used a relaxant, and rendered the patient apnoeic, and was sitting quite happily ventilating him, when the consultant arrived — a good deal earlier than I had expected! He was somewhat displeased with me, and refused to take over the patient because he was not breathing.

The ARI post was an excellent one in many ways, and I am very glad to have worked there at that stage of my career. I had given some anaesthetics while doing National Service in the RAMC, but this was my first full time anaesthetic job. At that time there were several senior anaesthetists who simply would not use relaxants. Gas, Oxygen and Ether, often, but not always, preceded by thiopentone was standard for all procedures, and this I had to use too. I had many a struggle with big tough, resistant patients, and remember well those days of turmoil and battle in a heady atmosphere of ether fumes. Some of the younger anaesthetists were using relaxants, and were willing to show me how. In addition, just a short way across the city were the Aberdeen Special Hospitals where the thoracic work was done. There the anaesthetics were largely light GA, relaxant and IPPV, I could sneak off there on occasion and, by travelling four miles across town, could step forward several years in anaesthetic technique.

I do not wish to seem disrespectful to those senior anaesthetists. Within the limits of their repertoire they were skilful men who produced good results, and operating conditions which I found difficult to emulate. Their patients did well, and they satisfied their surgeons. Relaxants were, after all, supposed to be an aid to the anaesthetists, and yet there were reports of people getting into trouble with them. So these men felt better off without them and sticking to methods they knew. All very justifiable. I can remember being impatient with them on occasion, and longing for, as I thought, the more scientific stuff, but now I realise just how much I learned from those men. And in fact, I should like to acknowledge their patience and good humour, and their vast store

of what can only be termed general medical wisdom. I know what can be done with ether, and I feel that I know what anaesthesia was like in the pre-relaxant era. It is almost as though while I was in Aberdeen, I saw, telescoped into one year the advent and development of relaxant anaesthesia.

But this dislike of apnoea was quite understandable. They had spent all their lives watching the character of the respiration. It told them where they were and what plane they were in. To be suddenly deprived of this took away the value of their life time's experience. Nor was there an ECG or any other sort of monitor to help, so if a patient wasn't breathing you really were lost. Not that apnoea was an innovation of the relaxant era. It had been deliberately produced by Guedel⁴, (using ether what's more) and Nosworthy in his classical paper⁵ on thoracic anaesthesia described in elegant prose the production of apnoea using Cyclopropane and slight hyperventilation.

Anaesthetists should really have been more ready to embrace this new technique of what we now call IPPV. After all in 1755 — 9 years after Culloden — John Hunter had ventilated dogs with bellows, and we all know about that sheass Wouralia. The Royal Humane Society had several bits of apparatus for restoring "the apparently dead". And this was maybe the trouble. Apnoea was so associated with disaster that simple routine ventilation was a foreign concept. However it did finally come to be accepted, though it was a few years before manual bag squeezing was replaced by mechanical ventilators.

Then in 1952 something happened that was to have far reaching consequences for the anaesthetist. Something that was to change the whole scope and concept of his work. This was the polio epidemic in Denmark — a particularly virulent epidemic with a high mortality. On August 25, 1952, an anaesthetist, Bjorn Ibsen, was called in for consultation by Professor Lassen in the Epidemiological Hospital of Copenhagen. This must be about the earliest reference to an anaesthetist being called in consultation for a non-anaesthetic duty. Ibsen's paper⁶ sets down factually, and with a certain element of under-statement, an account of a major event in medicine. It described how patients virtually moribund in respiratory failure could be resuscitated by measures which anaesthetists knew well, but which until then had not been used outside the operating theatre.

He also described how a CO₂ meter and an

oximeter were used and showed how underventilation gave rise to CO₂ accumulation even when full oxygenation of the blood was maintained with pure oxygen — the very point that had eluded so many anaesthetists in the early years of relaxant use. The paper details the immense amount of work involved, and the problems they met, but you can sense his quiet pleasure at seeing how the results could be improved by a very "simple technique familiar to all anaesthetists". Soon this was to involve us in the management of respiratory failure of many kinds — in the treatment of chest injuries, drug over-dose, head injuries and coma from many other causes.

Unfortunately for many years, this was very much on an ad hoc basis, and patients were treated with great difficulty and inconvenience in the side room or odd corner of an ordinary ward, until little by little, the concept of a respiratory care unit — the fore runner of the ICU came to be accepted. But it took time, and in 1960 the setting up of an ICU was still deemed of sufficient rarity and importance for an afternoon to be devoted to this topic at the Second World Congress of Anaesthesiologists in Toronto. Many of us remember this experience of frustration; of collecting together various bits and pieces of apparatus, and fitting it all together behind the screens; of trying to get an inexperienced and usually bewildered nurse to understand and of battling with sisters and assistant matrons just to get a nurse to help. And all this without interrupting one's ordinary work in theatre, because many surgeons, and, be it whispered, senior anaesthetists, were unwilling to let this kind of thing deprive them of a pair of hands in theatre. Finally the opposition died out (in some cases because the opposers died off!) and nowadays it would be unthinkable for the facilities of an ICU not to be readily available.

Meanwhile great changes were taking place in another field — obstetric anaesthesia — with the application of the principles of light GA and relaxants. Notable among the early workers was the late Dr. Hamer Hodges and many eminent members of this society have contributed to the continuing development of the technique to the high standard of today. Now, of course, some are turning away from the technique to local and regional methods and producing outstanding results. This detracts not a whit from the importance of the relaxant technique in obstetrics. By its introduction, refinement was brought into what had been a sadly neglected area, where very primitive anaesthesia had often been the norm.

Seeing this new aspect, younger men of resource and enterprise were now drawn to it. It takes only a few pioneers to show that a subject has interest, and then others will soon follow. It is a funny thing, but no specialty ever attracts from its humanitarian aspect. Only when it has been shown to have interest can you attract recruits.

All this new stirring of interest provoked research, not only in anaesthetic aspects, but in obstetrics too. For these newer methods, by reducing intra-operative risk to mother and baby, greatly altered the obstetrician's attitude to operative delivery. Research in any subject generally shows it to be much more complex than was at first appreciated and thus it was with obstetric anaesthesia. Its intellectual challenge attracted many anaesthetists to spend all, or a substantial part, of their time in maternity work. Had they not been so attracted there would never have existed enquiring workers to turn their attention to the benefits of the other methods more recently coming into vogue, many of them old methods, but now looked at through new eyes. There certainly would never have been personnel to provide the effective epidural analgesia service so often taken for granted, nor would there have been a professional voice to expound its desirability. So even if we discard GA completely from maternity work in its present form, it had an importance in the development of obstetric anaesthesia which even the most devoted exponents of regional anaesthesia should not ignore.

Nor should we forget how much this relaxant technique contributed to the current practices of neonatal resuscitation. For it was originally dependent on the presence in the maternity theatre of an anaesthetist skilled in intubation and ventilation — a manoeuvre already in use in neonatal anaesthesia. Many of us can remember having to turn our attention from the mother at a critical moment during anaesthesia to deal with the baby. In those days a paediatrician was to be found in only very few theatres. Now the place is often swarming with them! Often you didn't have a mechanical ventilator for the mother either. You just had to get the nurse to squeeze the anaesthetic reservoir bag for you. Changed days indeed: and a good thing too!

While all this was going on, several things had been happening outside the clinical field which would also help to mould the shape of anaesthesia. There was the establishment of the NHS — of enormous importance. We may carp about it,

and complain about it, but it did establish a service and the principal of consultants in all specialities being of equal status, and on equal basic salary. Differences in actual earnings have crept in over the years, but that does not affect the principal, and it is an important one. We tend to take it as self evident, to take it for granted, but it did not just happen. It all had to be fought for, and negotiated for — hours and hours of committee work went into it.

The result was that young doctors attracted to anaesthesia could now see the possibility of earning a living and it hadn't always been like that. There is much that is wrong with the Health Service and in many ways it has fallen short of its original promise, but anaesthetists at least, should not overlook such good that it has done.

The formation of the Faculty in 1948, set on our speciality a professional seal previously lacking, and the subsequent development of the Fellowship examination in 1953 spelled out the academic standards expected of us. These standards are not static, but change, as we can see in the proposed new form of the Fellowship examination, to take account of alterations in emphasis within the body of anaesthetic knowledge. The spectacular advances that we have seen in surgery over the years have demanded complementary sophistication in anaesthetics. In some ways we have rather made a stick to beat our own backs in responding to these challenges, for we have conditioned our surgical colleagues to expect that, however major the surgery or however ill the patient we shall be able to provide anaesthesia that is safe and trouble free. The patients too, now expect great things from their anaesthetist, they are much more knowledgeable and much more interested. Living up to all these expectations has focussed attention on just how much skill it sometimes takes to make the anaesthetic appear as a non-event to the consumer.

All this has been mirrored in the number of University chairs there now are in anaesthesia. In 1936 Professor McIntosh had the first in Oxford and 1955 saw but the second — Professor Mushin in Cardiff. I don't know how many chairs there are now, and there are still some notable omissions, but I hope it won't be too long before every medical school can see its way to establish a well endowed chair in anaesthesia.

And so when we come to look at our speciality as it stands today, we can see that there have been many factors involved in this process of evolution —

clinical — academic — political — social — all acting and reacting with one another in varying degrees of vigour and importance. But somewhere lurking among them all, we keep seeing the influence of these relaxant drugs. If we were to liken the whole thing to a chemical reaction, we would, I submit, say that this curare, if not itself a principal reagent — this curare, the flying death from the jungle was, at the least, a catalyst.

References

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| 2 McIntosh RR (1954) <i>Proc Roy Soc Med</i> 47,33 | 5 Nosworthy MD (1941) <i>Proc Roy Soc Med</i> 34,479 |
| 3 Halton J (1947) <i>Proc Roy Soc Med</i> 40,601 | 6 Ibsen B (1954) <i>Proc Roy Soc Med</i> 47,72 |

GUEST LECTURE

Prof. J. NORMAN

THE BUSINESS OF LEARNING

By the time medical students graduate they will have been in full-time education for at least fifteen or sixteen years and we could assume that they will know enough about how to learn to keep them through the rest of their professional lives. Yet at their next examination hurdles, in general medicine, surgery, anaesthesia or what you will, they produce pass rates which are low. In 1977 I commented that the pass rate in the London Primary F.F.A. in 1976 was 31% and for the Final examination 34% (Norman, 1977). Not much seems to have occurred since then: in 1981 32% of attempts at the Primary were successful and 35% at the Final.

I believe that the problems that our trainees have, arise not from the content and nature of the examinations, but from a failure of teachers to teach how to learn and of students in learning how to learn. Perhaps in our medical schools and on our postgraduate courses we should concentrate more on the business of learning and less on the idea of getting through a syllabus whether for biochemistry in medical school or anaesthesia for liver transplantation for our registrars. I am using 'business' in the sense of it being an activity in which we invest effort in the hope of getting a return. Learning can be hard, long and painful — and yet there is a considerable body of knowledge available to help make it easier. Professor Beard's book appeared in a 3rd edition in 1976; it still makes good reading in 1982 and perhaps those of us involved in postgraduate education as teachers and examiners would do well to look at it again whilst considering how to assess our general professional trainees.

There is another advantage for each of us if we learn how to learn. One of the embarrassing questions candidates for senior registrar and consultant posts are asked is 'how do you intend to keep up-to-date with the speciality and its developments in the future?' Rarely do I hear anything but intentions to read the journals and, perhaps attend some meetings. Few seem to know they will become the teachers of the future and few that by organizing their learning they will not only add interest to their professional lives but will also benefit their patients and trainees.

In 1963 shortly after passing the Final F.F.A. I was involved in anaesthetizing the second patient in Leeds to receive a kidney transplant from a living donor whose brain was dead. The anaesthetic technique involved thiopentone, tubocurarine, suxamethonium, pethidine, nitrous oxide and intermittent positive pressure ventilation. An intravenous infusion was used. Subsequently the girl survived some two years although she did need IPPV overnight for her pulmonary oedema. I could use the same anaesthetic technique today: indeed we all use similar methods for many patients. But the questions remains: is this the most satisfactory technique; will other drugs improve the patient; will highly sophisticated monitoring improve the quality of care. Only if we learn to evaluate our basic methods and their alternatives will we improve.

Obviously what I am now considering is how we evaluate our sources of knowledge: be they text books, journals, meetings, discussions and practical

experiences, as well as more formalized research. One useful introduction to this is the work of Karl Popper. There is an excellent account of his approach (Magee, 1975). Traditionally in seeking to find a basis of knowledge – whether of the Laws of Gravity or of deciding the basis of anaesthetic practice – one starts with a number of observations from which a deduction of a general principle is made. Experiments or other observations are then made to confirm this basic theory. Popper's view of gaining knowledge is different. First he does not like deduction. Because the sun has risen every day for the last several million years we cannot deduce that it will certainly rise tomorrow. All Popper allows is that we can predict it will and we can test that prediction. Indeed he claims that we learn most when our predictions fail for then we have to raise new theories to test. The idea that prediction is the basis of science is given by one of the characters in 'The Black Cloud' by Fred Hoyle (1957). In talking of looking back at correlations as evidence Alexandrov comments, 'Correlation obtained after experiment is bad science. Only prediction is science'.

How does this work out in practice?

In recent years it has become technically possible to measure the minute plasma concentrations of drugs used in anaesthetic practice. A whole new field of study is opening up (pharmacokinetics) and a number of approaches are on offer. One, perhaps the commonest, looks at only plasma concentrations and fits two or three compartment models to the data (see e.g. Hull, 1982). Others are more complex and use many more. Whilst each may account for the findings on which they are based their value is going to be in predicting what will happen to the next set of patients. For example, I have used data given by Shanks and his colleagues (1980) to predict how long a given dose of pancuronium will be effective – that is until the twitch response is back to 50% of control. On average the time is about 40 minutes. But by looking at the spread of results – combining the conditions which given rapid elimination or those which slow it, the time varies from 25 to 110 minutes. This prediction from Australia matches my data from Southampton where a standardised dose of 0.1 mg/kg produces paralysis from 20 to 115 minutes. Where the prediction does not help me is guessing how long that dose will last in my next patient, as Popper says, that is a new problem and we will have to come up with new ideas and test those.

But, to return to the business of learning. In

learning of this type we need to know how to design our studies to get the maximum information for the least effort. Can I recommend a fourth book? Moore (1979) presents an introduction to the craft. He looks at problems of collecting, organizing and presenting and finally drawing conclusions from data. It is much the best value around and might interest readers in having only two tables at the end – one of random digits and one of square roots!

Given then that we can learn to learn, how soon can we start? Southampton is a new medical school: this year we are ten years old. One of the features of the curriculum is that the students spend the bulk of their fourth year in a study-in-depth'. The formal aims are given as:

- 1 to develop a basis for critical self-education
- 2 to study and use scientific methods
- 3 to learn some of the limitations of the content of the curriculum. Essentially we are in the business of learning.

In the last five years we have had between one and seven students each year in the anaesthetic department. Their studies have varied from anaesthetising snails to looking at renal function in cardiac surgery. I would like to present some of the work done in two areas as a tribute to the students who have added considerably to the department.

One area of study over the years has been post-operative pain. You will find in the literature many statements that postoperative pain is a major problem and that it needs treating better than we do conventionally. But how bad is it. In 1976 one of the girls used the analogue scale to assess how bad patients though the pain would be and how bad it was after hysterectomy or cholecystectomy (Brighouse, 1977). Patients expected a 50% score and on average things were worse postoperatively than they had expected. Pain relief was provided by i.m. papaveretum on an "as needed" basis. The need was assessed as 60mg. Since then we have looked at a number of variants without much success, using i.m. drugs as a basis. One area which did show promise was the use of the Janssen ODAC programmed intravenous administration technique. Fentanyl given as a slow continuous intravenous infusion with additional given on demand by the patient pushing a button usually gave much better analgesia (Howie, 1979). Such machines will be expensive and, at the moment, do not always function correctly even if always safely. This year's variant has been to look at a randomized trial

comparing i.m. papaveretum 'as needed' with continuous infusion of morphine or pethidine (Burns, 1982). The prediction was that the continuous infusions would prove better. Statistically they do not but what is remarkable is that whereas in 1977 Brighthouse reported that the average postoperative pain score was of the order of 65 on the scale, this year with i.m. papaveretum it is down to 38. On average the patients are getting 15mg more of the drug. What have we changed in five years? I can think of a number of explanations or new hypotheses. These we can test in the next few years.

I have one final illustration. One of our girls last year wanted to look at postoperative shivering and was using a mass-spectrometer. The problems were getting difficult. Somewhere we came across a reference to the problem of preoxygenation. How long does it take? The standard text-book give times varying from two to ten minutes. It looked that there would be a number of variables including the size of reservoir bag, the type of breathing system and whether the system was prefilled with oxygen or not. Berthoud (1981) looked at four variables: Magill or Bain system, bag full or empty. In patients; preoxygenation was defined as reducing the end-tidal nitrogen concentration to less than 4%. It was achieved on average in 18 to 25 breaths or about 2 minutes. What was vital was the use of a gas tight face mask: allowing any leak led to air entrainment and less effective preoxygenation. This was likelier the longer the anaesthetist attempted to hold on the face-mask!

To conclude. I believe that most of us never learnt how to learn and that, as a consequence, we find the process difficult and uninteresting. This makes difficulties for ourselves, our trainees and, possibly, our patients. Whether altering the medical school curriculum as has been done in Southampton will have the desired effects is of course another problem.

In the meantime can I leave with the following 'pot-shot'.

'Education has so much to learn'.

Acknowledgements: It is a particular pleasure to thank all the Southampton students who have chosen anaesthetics as their fourth year study.

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A SUMMARY OF THE EFFECTS OF ADDED VASOCONSTRICTORS ON SPINAL ANAESTHESIA WITH AMETHOCAINE

Intrathecal vasoconstrictors have been used in spinal anaesthesia for many years in an attempt to prolong the duration of intrathecal local anaesthetics. Recently two studies using lignocaine and bupivacaine have shown that whilst occasional very prolonged blocks can be produced by the addition of adrenaline or phenylephrine, this cannot be relied upon in every case. However, many anaesthetists, particularly in the United States feel that vasoconstrictors definitely do prolong the action of amethocaine in spinal anaesthesia. As there has been no reported controlled study of the effect of adrenaline or phenylephrine on the duration of block with amethocaine it was decided to perform one.

Methods

Thirty patients in three groups of ten, scheduled for urological procedures in whom spinal anaesthesia was considered appropriate took part in the study. Premedication consisted of 10mg of diazepam. Subarachnoid injections of solutions containing 1.5ml of 1% amethocaine (15mg) alone or to which 0.2ml of 1:1000 adrenaline or 0.5ml (5mg) of phenylephrine has been added, were given via the third lumbar interspace with the patient in the sitting position. The patient was then placed in the horizontal supine position for 5 to 10 minutes before being turned to the lithotomy position. Anaesthesia was defined as the loss of sensation of light touch and analgesia as the loss of sensation of pinprick and regular assessments of both were made from the time of injection until no sensory impairment could be detected. Systolic blood pressure was also recorded regularly. The nature of the solution used in individual cases was known only to the anaesthetist making the injection and was determined immediately beforehand from a random list. Results were analysed using students paired and unpaired t-tests with $p < 0.05$ being taken to indicate a significant difference.

Results

There were no significant differences in age, height or weight between the three groups. The maximum cephalad spread was similar for each group, being about T8 for analgesia and T11 for anaesthesia. The systolic blood pressure of patients receiving vasoconstrictor fell by about 10% from their control value. In the group receiving amethocaine alone this fall was about 20%. This difference was significant. The additional of adrenaline or phenylephrine significantly prolonged the duration of motor block although there was no difference between these two.

The mean time after injection until recovery of full sensation was 385 minutes in the group receiving amethocaine alone, 464 minutes in the group receiving adrenaline and 512 minutes in the phenylephrine group. The addition of a vasoconstrictor produced a significant increase in this time although there was no significant difference between the two vasoconstrictor groups. Only phenylephrine produced a significant increase in the times at which anaesthesia and analgesia were last detectable in the last thoracic dermatome (236 and 324 minutes respectively) compared with the plain amethocaine group (178 and 230 minutes).

Conclusion

Both adrenaline and phenylephrine prolong the time until the return of full normal sensation when used intrathecally with amethocaine. The results of this study confirm findings with lignocaine and bupivacaine that intrathecal vasoconstrictors appear to have their most marked effect on the duration of spinal anaesthesia in the lower lumbar and sacral segments. However where this study differs is in the finding that phenylephrine will also provide clinically useful prolongation in the last thoracic segment. Thus if an increase in the duration of spinal anaesthesia with amethocaine is desired then phenylephrine is the vasoconstrictor of choice. In addition it will reduce the decrease in systolic blood pressure.

Photocall

Snapped at the A.G.M.

Photos: Mr J. Primrose / Captions: Anonymous



...and the patient just floated up over my right shoulder



One on the accordion, two on the fiddle...



'Spot the Ball'



The cat that got the cream



Stop, Bruce, I've heard it before!

Registrar's Meeting

WESTERN INFIRMARY, GLASGOW — 6th May 1982

Thursday 6th of May, 1982 was an unusual day. Not only did it snow heavily in the morning but also there was a notable concentration of anaesthetic talent, potential and realised, in the Western Infirmary, Glasgow, for the Scottish Society of Anaesthetists' Registrars' Meeting.

Those attending were welcomed during coffee by Professor A.A. Spence of the University Department. Suitably refreshed we then had the opportunity of visiting one of three groups of three demonstrations. The subjects were:—

1 A personalised monitoring system; the pain clinic; and a national study of the health of U.K. female doctors.

2 A visit to the new cardiac I.T.U.; the mass spectrometer; local analgesia in children.

or

3 High performance liquid chromatography; low flow and closed circuit anaesthesia; and atracurium for neuromuscular blockade.

During conversation over a glass of sherry before lunch it was evident that whatever demonstrations people had attended they had found them well presented, interesting and relevant. Lunch itself was of the same high standard as the other events of the meeting and provided an opportunity to chat to colleagues from other parts of the country (and overseas) and exchange opinions on anaesthetic practice, medical politics and the likelihood of the early morning blizzard returning.

After lunch the meeting continued in the West of Scotland Postgraduate Centre at Lancaster House in the west-end of Glasgow. In the first part of the afternoon, chaired by Dr. K. Holloway, four papers were presented. The papers (and speakers) were:—

1 Spinal anaesthesia in the elderly (Dr J.R. Dougall); a concise exposition of the advantages and disadvantages of the technique;

2 Computerised anaesthetic records (Dr D. Duthie); an interesting review of the advantages of such a system in terms of collating statistics and of exercising "Medical audit" of anaesthetic practice;

3 The role of antacids in labour (Dr. A. MacNeil); a comprehensive and current review of the available agents including H₂ receptor antagonists;

4 Complications of epidural and intrathecal opiates (Dr. J.G. Todd); a succinct appraisal of an important contemporary problem.

The contents and presentation of these papers were of a uniformly high standard.

There followed what must be regarded, with due respect to previous speakers and participants, as the high point of the day. This was a seminar on "The Uptake and Elimination of Volatile Anaesthetics" by Professor E.I. Eger II of the University of California. That he was available to speak was fortuitous; that he agreed to do so was gracious; and that he did so in an almost informal yet lucid and precisely structured fashion was masterly. His technique of pursuing a topic by asking the audience questions which revealed a greater or lesser degree of comprehension was an excellent example to anyone who aspires to being a medical teacher.

Unfortunately we eventually ran out of time. The end of Professor Eger's seminar marked the close of an excellent programme. We must re-echo Professor Spence's vote of thanks to all those who organised, participated in and subsidised such a worthwhile meeting.

Duncan L. Weir

Scientific Meeting

EDINBURGH — 19th November 1982

The 1982 Scientific Meeting was held in Edinburgh at the Scottish Health Services Centre, which is adjacent to the Western General Hospital. The meeting was organised by Dr Ivor Davie and attended by over 90 anaesthetists. The morning and afternoon sessions were on "The treatment of postoperative pain". In the morning the President introduced four speakers (Drs. Masson, Park, Scott and Chambers) from the Royal Infirmary in Edinburgh who considered the various methods available for treating pain after surgery. After an excellent lunch Professor Robertson, in his last public appearance before retirement, took the chair for three presentations on particular aspects of analgesia by speakers from Edinburgh's Royal Infirmary (Dr Littlewood), Sick

Children's (Dr Burtles) and Western General (Mr Hamer-Hodges) Hospitals respectively. The number and quality of contributions from the floor during the discussion sessions indicated just how topical the subject is and how great the concern about the need to improve our treatment of postoperative pain. Abstracts of these papers follow below.

The final event of the day was of course the fifth Gillies Lecture. The President introduced Professor T.C. Gray, Emeritus Professor of Anaesthesia at the University of Liverpool, by referring to his own period of training in Liverpool and outlining some of Professor Gray's many achievements. The title of the Lecture was "Safety-a mirage?", and it follows the other abstracts.



The President making the presentation to Professor Gray

Photo: GR Park

ANALGESIC DRUGS

The currently available analgesic drugs were briefly reviewed. The drug which remains the yardstick against which any other analgesic must be measured is still morphine, the main disadvantages of which are dose-related respiratory depression and drug dependence. Pethidine, papaveretum and diamorphine are old and tried alternatives which are no better and, on the whole, no worse than morphine. There are many other drugs which are used occasionally, perhaps for specific purposes, which would not be missed if they were removed from the pharmacopoeia (eg levorphanol, piritramide, oxycodone). In the morphine antagonist group pentazocine was the first to be introduced into clinical practice but it has failed to live up to

Dr. A.H.B. MASSON

expectations. Of the newer drugs available, zomepirac and nefopam are nonnarcotic drugs which, although effective analgesics, are mild and not good enough to replace the standard drugs for postoperative pain. There remain the newer opioid drugs of which two show definite promise. Meptazinol which, although a mixed agonist/antagonist, may have an altogether different mode of action, and may have specific advantages in obstetric analgesia and possibly in patients with head injuries while buprenorphine with its long duration of action and low dependence liability may have a place in the treatment of postoperative pain through the lack of a specific effective antagonist is a disadvantage.

TOWARDS BETTER OPIATE ANALGESIA

Dr. G.R. PARK

Morphine 10mg IM 4 hrly prn is a common prescription for post operative pain. Estimates of its ineffectiveness suggest 20-60% of patients suffering severe pain post operatively. The reasons why it fails include fear of addiction and respiratory depression, inability or unwillingness of the patient to ask for the drug, practical difficulties in administering the drug, parsimony and biological variation. There appears to be no relationship between the dose required to relieve pain and height or weight. However, older patients do seem to require less in a 24 hour period than do younger patients. It is suggested that, if pain persists despite the four hourly administration of Morphine, the time interval between doses is decreased before the dose is increased.

A logical development of frequent IM doses of Morphine is to infuse the drug continuously. The advantages of this technique over IM administration have been shown to include better analgesia usually with a smaller total dose, better lung function, a lower incidence of chest complications and more efficient use of nursing time. There is, however, the risk of overdosage and one study has shown that periods of apnoea may occur.

The optimal way to deliver opiates is by patient self administration. Although an early attempt at this using a simple mechanical device was successful, the need to incorporate a variety of safeguards has led to the development of sophisticated electronic devices. These are at the present moment too expensive for routine use.

LOCAL BLOCKS

Dr. D.B. SCOTT

Regional anaesthesia frequently outlasts the duration of operation and provides a useful period of postoperative analgesia. The nerve block can be prolonged indefinitely by using a catheter technique. While this has proved very successful with epidural block in labour its use has been much more limited for postoperative pain due to the practical problems that have to be solved in a surgical ward.

The two blocks of most use in postoperative pain are epidural and intercostal. Epidural block can be maintained either by intermittent injections or by a continuous infusion. To produce a discreet band of analgesia, small doses (3-5ml) of bupivacaine 0.5% or 0.75% can be used but must be repeated hourly. Larger doses (8-10ml) last longer but cause more widespread block and more paralysis of the lower limbs. Continuous infusions are much more practical

from the nursing point of view and good results are obtained with 0.1% bupivacaine given at 20ml/hour. The main complication is hypotension which affects about 5% of patients and is easily treated.

Intercostal block is an excellent method of obtaining analgesia after upper abdominal surgery particularly with a subcostal incision. The use of 0.5% or 0.75% bupivacaine will usually give a block lasting many hours. The 6th-11th intercostal nerves need to be injected - unilaterally for a subcostal incision. Longer lasting blocks can be obtained by inserting teflon intravenous cannulae into the intercostal spaces and making further injections when pain re-appears. The only complication is pneumothorax which can be avoided by careful technique.

It is important to remember that opiates may be required in addition to peripheral nerve blocks if visceral pain occurs.

INTRATHECAL AND EXTRADURAL OPIATES

Dr. W.A. CHAMBERS

The discovery of opiate receptors in the spinal cord led to the demonstration in animals and man of the efficacy of what has been termed selective spinal analgesia - that is analgesia produced by the local

application of opiates to the spinal cord. Early reports were almost all very enthusiastic as to the benefits of this method but only recently have properly controlled trials been carried out.

Extradural opiates have a slow onset of action and appear to produce better results if given with a local anaesthetic before the onset of pain. They are not as effective in labour as for post-operative pain. The doses which are currently being used are similar to those used parenterally and systemic absorption plays an important part in the effects produced. With intrathecal opiates the effects are produced solely by interaction with receptors locally but the cord levels of drug which result are very much higher than with other methods. It is still possible that these levels may prove to be neurotoxic.

The most worrying side effect is late respiratory depression and this may become manifest 12 hours after the initial administration. It is more likely if

additional parenteral opiate is given for any reason and also in elderly patients. With extradural use it is also more likely if there has been an inadvertent dural tap with thoracic administration.

It is very unlikely that this method of pain relief will achieve more widespread use post-operatively. The risks of late respiratory depression are too significant for patients to be returned to an ordinary ward. Even if some sort of high dependency unit is available for immediate post operative care this method is not as good as was initially thought. It will however retain an important place in certain specific situations such as the treatment of fractured ribs, some post operative patients who can be closely observed and in certain chronic pain conditions.

CHRONIC POSTOPERATIVE PAIN

A small, but significant number of postoperative patients continue to have pain for months or years. These patients form 20-30% of referrals to our pain clinic and may, depending on the chronicity of the pain, show all the features of the "chronic pain patient". Certain well recognised syndromes exist including nerve entrapments, causalgias, phantom pain, post-thoracotomy pain and post surgical low back pain, but the exact physiological mechanisms by which pain is generated in these conditions is not clearly understood.

Three neurological areas may be conveniently considered. Firstly in the peripheral nerves, even following minor injury, axonal sprouting with varying

Dr. D.G. LITTLEWOOD

rates of regeneration alter the normal afferent information. The efferent sympathetic nervous system appears to become overactive, often resulting in severe vasomotor disturbance.

In the spinal cord altered neuronal connections, combined with alteration in afferent excitatory/inhibitory influences on dorsal horn neurones, may result in "central" pain conditions or neuralgias. Finally emotional and personality factors, including anxiety and depression, may predispose to, or result from, these chronic pain syndromes.

Therapeutic intervention may be directed at any or all of these areas and there is little doubt that early intervention may be relatively easy and rewarding.

ANALGESIA IN CHILDREN

Modern anaesthetic drugs and apparatus allow us a wide degree of control over many body functions, but for the most part we leave the management of postoperative pain to the nurses, over whose training and attitudes we have little control. Whilst care in a paediatric hospital may be better, the bigger child in an adult ward may be the least fortunate.

Since the introduction of the caudal block combined with general anaesthesia by Kay and by Armitage, we have extended the use of local blocks

Dr. R. BURTLES

plus general anaesthesia to a large number of operations. Much of paediatric and plastic surgery is minor in nature, but nonetheless is followed by pain and distress which is transmitted to caring parents. The accent therefore should be to prevent rather than to cure. An appropriate local block is advocated where it is possible, otherwise a dose of an opiate analgesic should be given intramuscularly towards the end of surgery. Such a "single-shot" arrangement for local or opiates may provide all the analgesia that is required.

DAY CARE SURGERY

Day care surgery has much to offer patients, but there are drawbacks. Most of the problems relate to the minor sequelae of general anaesthesia and or to the difficulties of providing post-operative analgesia. The journey home is a time of particular stress. Many of the difficulties can be managed and considerably reduced (if not totally abolished) by the use of local

Mr. D.W. HAMER-HOGES

anaesthetic techniques. Many operations can be performed under local anaesthesia alone and careful timing of the use of a long-acting drug will ensure total analgesia until after arrival home. Even when a general anaesthetic is required the concomitant use of local has much to offer.

Editorial summary

GILLIES LECTURE

SAFETY—A MIRAGE?

Prof. T.C. GRAY

I am greatly honoured by your invitation to deliver the John Gillies Lecture and to be associated with this memorial to a remarkable personality whose friendship I was privileged to share. Other lecturers in this series have paid tribute to his contribution to our specialty — as a pioneer who enlarged the scope of the anaesthetist by bringing the circulation under his control, and so, changed our concept of the relationship between flow and pressure, between capacitance of the capillary bed and the blood volume. Sir Gordon Robson, the first lecturer, drew attention especially to his impact on the anaesthetic political scene in the Association and during the Faculty's formative years. This was at a time when it was not easy for a man from Scotland to influence events south of the border. But before entering on the general theme of my lecture, may I take this opportunity to fill in the position of John by putting on record my own estimate of the means by which he achieved so much influence on our affairs. Like all my Scots colleagues — he had remarkable perspicacity and this played a large part in his political success certainly; his integrity, obvious to all, and his patent sincerity — yes; but perhaps even more than these his warm friendliness, his openness to all, young and old, peer and junior, British and overseas — for he had almost as many friends in the Americas and on the Continent as he had at home — these were irresistible.

My personal memories are many. I first met him at a Royal Society of Medicine Section dinner when R.J. Minnitt, whose guest I was, was President and he introduced us. They were, of course, friends and

collaborators in the only textbook on anaesthesia in Britain at that time. It was over the post-dinner socialising that I mentioned my hesitation about accepting some commitment or other which was going to mean time away from the family and from my anaesthetic practice. He said as he gripped my arm: "Laddie, at your stage you refuse nothing" — advice brief and pointed which had a profound influence on my personal future.

Later, when I served on the Association Council under his Presidency and shared with him the formative years of the Board of Faculty, at the end of the day when the committees were over — and they were often exciting with plenty of cut and thrust — we often dined together and sometimes did a show. It was always a musical. I remember especially the first production of "Call Me Madam" and "Guys and Dolls" — our enjoyment of the latter was made piquant by the resemblance of one of the Runyon characters to Ivan Magill — then the walk back to our respective club or hotel when I delighted in his extraordinary knowledge of London and especially of its show-biz personalities. He would suddenly stop and say "That is Jack Buchanan's apartment" or "Noel Coward lived there." Here, perhaps was another secret of his success — his interest in everything and everyone. This it was that gave him a warmth of personality and a charm which enabled him, almost unwittingly, to influence great affairs.

It was so right that the underlying theme of these lectures should be "Safety". Football was one of John Gillies' loves and it is apt to use the metaphor that safety was the goal at which all his teaching and work was aimed.

My theme is that "Safety" is a goal which like an oasis in the desert is most certainly worth pursuing — literally a matter of life and death — but, like a mirage, it ever eludes us. Despite that we are stirred on to even greater effort. Now it is important in pursuing a goal to be able to measure progress and to do this you need a base-line.

It is, in fact, not at all easy to determine just how safe is anaesthesia and great effort has been expended over many years, in many countries to define that base-line from which to measure progress. I want you to bear with me and look a little critically at these attempts at medical audit and quality control. In doing so I must pay homage to a pioneer in the field — although I cannot do so without commenting on the counter-productive effort of some of the controversial opinions which he expressed.

Robert Macintosh's paper written in 1948 and published in the B.J.A. on "Deaths Under Anaesthesia" was a watershed in this type of investigation. At the time of its publication I shared the editorship of the Journal with Falkner-Hill and I recall our excitement when the Professor in Oxford telephoned to ask if we were prepared to publish his paper. It was, he said, likely to be controversial, if not sensational. At that time we were in competition with the Association Journal "Anaesthesia" both for readers and for good material. Good material for publication was limited as the newly established University Departments had not yet got into full swing. An offer of this paper from the first professor in England on such a subject was not to be rejected. It could be a scoop - and so it proved.

Macintosh suggested an Anaesthetic Mortality, defined as deaths due entirely to mismanagement of anaesthesia, of 150 patients each year and at the same time he exemplified several disturbing accidents. But that was not the reason why his paper was sensational. He had for some time been exhorting anaesthetists, in the cause of safety, not to cover up but to write up their accidents. This he was prepared to do himself. He had also formed the opinion that "There should be no deaths due to anaesthesia." He went further and deprecated the practice of coroners, who, in excellent faith, tended when investigating deaths under anaesthesia, to arrive at verdicts which he construed untenable: such verdicts, for example, as "Every care was taken by the anaesthetist but the child's heart just could not withstand the anaesthetic" and this in a perfectly healthy child

having a minor procedure. In addition, he pointed to a tendency to cover up. "The anaesthetist" he wrote "doesn't go out of his way to tell the whole truth." It was courageous to say this and it needed saying at that time for there is little doubt that sometimes it was true. As anaesthetists are only human it still is.

Now, in the quest for safety, these two propositions are very relevant to the usefulness or otherwise of the numerous surveys of mortality and morbidity which have followed this paper.

The first, that all anaesthetic deaths are due to error, has almost certainly given a bias in the assessment of accidents. Even as late as 1978 in his report on the findings of the Special Committee investigating deaths under anaesthesia in New South Wales, Ross Holland baldly stated that "anaesthetic agents themselves are not lethal except when they are misused." That that statement as well as that of Macintosh is fallacious is clear when one thinks of potential causes of death which have been recognised only comparatively recently. I am quite sure malignant hyperpyrexia is not a new condition; how was it classified prior to its recognition in the late seventies? Similarly how were classified other causes of mortality only comparatively recently recognised — hypoxia due to abnormal haemoglobins, and especially perhaps anaphylaxis now found to be a major cause of collapse in the recent, as yet unreported, survey of anaesthetic accidents in France: these and undoubtedly other conditions awaiting recognition — must lead one to the conclusion that the generalisation "no anaesthetic death without error" is itself erroneous and likely to be prejudicial in investigating deaths.

Arthur Keats in his Crawford W. Long Memorial Lecture given in Atlanta in 1978 gave a very telling rebuttal of this teaching; it was, he thought, the foundation of the inferiority and guilt complexes too often found in anaesthetists.

Quite apart from the conditions I have already mentioned causing blameless death, he drew attention to what he called "Obligatory deaths associated with hospitalization." Three hundred and fifty thousand Americans die every year with what is termed over there the "sudden death syndrome." This is defined as "Unexpected natural death occurring within one hour after collapse of an individual in apparent good health." On the assumption that 16,000,000 anaesthetics are given each year in the U.S.A. and that the day of and the day following the operation are the most vulnerable

periods for anaesthetic mortality, there must be 32 million man-days each year during which any one of the 350,000 Americans, experiencing the sudden death syndrome, might be by chance under anaesthesia. His conclusion was that "anaesthetic causes (for mortality) should never be a diagnosis by exclusion.....(they).....must be reasonably related to a death before a judgment of anaesthetic death is accepted."

Without any fault on anyone's part one is just as likely to die under anaesthesia as at any other time, and, when one adds to that the fact that anaesthetic drugs carry their own inherent risks, the mirage of safety has clearly eluded us and will continue so to do.

Macintosh's further statement concerning the reluctance of anaesthetists to reveal all makes us look askance at efforts to audit our performance. One must question how far retrospective surveys dependant on hospital records, even if computerised, are likely to reveal the real picture in respect of the accidents which are occurring. Undoubtedly reviews such as that of Lunn et. al. (1982) based on the Cardiff record system are valuable as epidemiological studies, revealing, for example, the number of anaesthetics given by consultants as opposed to juniors, the frequency with which individual drugs are used and techniques employed, etc. But, it is difficult from these to be sure just what happened if there has been an accident.

On the other hand, prospective surveys based on the voluntary reporting of accidents are also open to objections and may not provide a reliable base-line from which to measure progress.

In the New South Wales survey remarkably 90% of the deaths were reported to the investigating committee; but in the recent report by Lunn and Mushin (1982) of the investigation of anaesthetic mortality carried out under the auspices of the Association of Anaesthetists of Great Britain and Ireland, as compared with the deaths recorded by the Hospital Activity Analysis only 61% of the six day deaths after operation were reported to the Committee. The authors of the report, of course, recognised this weakness. One is bound to wonder to what extent the remaining 39% would have influenced the findings. Would the statistics have become worse, because the anaesthetists felt that the fatal outcome was due to their ineptitude or laxity and were thus not disposed to report them. Actually they could have been right in this guilt feeling or quite wrong, for often an individual will

blame himself for disaster — feeling he should or could have done better — when he is, in fact, blameless. Or would the statistics have been better because the anaesthetists, judging themselves — again, rightly or wrongly — believe that they had nothing to report: that the incident was in no way connected with the anaesthetic? You have only to think of cardiac arrest during tubal insufflation or laparoscopy or as a result of secondary haemorrhage to see how that could happen.

There is, I fear, another reason, now, why one may be reluctant to report candidly our mistakes no matter how altruistic our desire to help others to avoid them. That is the recent erosion of the confidentiality of such reports.

Recent legal opinions must have a deplorable effect on the value of surveys which are dependent on voluntary reporting. This is of such importance that it must be mentioned, because of the likely impact on our struggle towards safety through medical audit. The actual legal case, which has blown sky high any chance of privilege for reports and surveys investigating mortality and morbidity is that of **Waugh v. British Rail Board**. Although many of you may know of it some will not and the story of this case is of considerable importance.

Mr Waugh was involved in a fatal accident while working for British Rail. Within two days, the Board set up an internal enquiry before two railway officers. The enquiry clearly had two purposes: to enable the Board to give their legal advisers facts which could enable them to advise the Board as to their legal liability, should any claim for damages be made on behalf of the estate of Mr Waugh. The enquiry was also to discover what actually happened, so that steps could be taken to avoid a repetition of the accident. The parallel with investigations into anaesthetic and other medical accidents is clear.

The Railway Board regarded these reports as confidential and depended on the purpose of legal privilege on the wording at the top of forms upon which the reports were made. I report it in full for it is of critical importance: It reads "For the information of the Board's solicitor: This form is to be used by every person reporting an occurrence when litigation by or against the B.R.B. is anticipated. It is to be provided by the person making it to his Immediate Superior Officer and has finally to be sent to the solicitor for the purpose of enabling him to advise the B.R.B. in regard thereto".

A claim for damages was eventually made and the late Mr Waugh's legal advisers asked for discovery of

the evidence given to this confidential enquiry. The B.R.B. refused on the grounds that the purpose of the report was to advise the solicitors, they were confidential and legal privilege was claimed. The plaintiff took this issue to Court and having failed there, to the Court of Appeal. Although in that place, the confidentiality of the report was upheld by two of the judges, the third, Lord Denning, expressed the opinion that justice was not served by such reports being given privilege. Among other things, he considered that the rule of legal privilege "is not an aid of justice. It is a rule in aid of litigation — it is, moreover, a rule in aid of **one side**. One side could use evidence if it was favourable to it, but the other side did not have access to such evidence if it was unfavourable." As the Appeal Court had upheld privilege despite Lord Denning, permission was given for an appeal to the House of Lords. This was because it seemed that a matter of public interest and importance was at stake. In the House of Lords, unfortunately, it was unanimously decided by their Lordships that such reports, although given in confidence, did not acquire legal privilege. Lord Russell stated that "The claims of humanity must surely make the dominant purpose of any report on an accident (particularly where personal injuries have been sustained) that of discovering what happened and why it happened, so that measures to prevent its recurrence could be discussed and, if possible, devised." From then on claims to privilege for similar reports can only be sustained if it can clearly be demonstrated that the **dominant** purpose of the report is that of submission to a legal adviser because of possible litigation. It is interesting that two cases in Australia have been similarly judged by the High Court in that country: in fact the harder criteria of "sole purpose" has been adopted there. This was the criterion which, in fact, was advocated by Lord Denning, but rejected unanimously by the House of Lords.

Because of this the D.H.S.S. delayed the publication of the most recent report of "The Confidential Enquiries into Maternal Deaths in England and Wales" despite the fact that these reports have done an enormous service not only in gauging progress towards safety, but in pointing to the avoidability of many common accidents. It has now been decided to publish the latest report and, of course, the Nuffield Hospital Trust published the Association of Anaesthetists of Great Britain and Ireland's survey into mortality (Lunn and Mushin, 1982) presumably deeming the data reported therein

as unlikely to be traced to individual cases. Nevertheless, it is surely more than likely that doctors will be hesitant about making such voluntary reports and revealing all, especially if there is any danger of litigation, because they will not appreciate that such reports are not confidential. With this reluctance there must be much sympathy. Such confidential reports from a doctor involved in a case can come into unsympathetic hands, may be used deliberately or secretly and may be mislaid. There is even a story of one such report being found in a hospital case sheet. Again, I make the point, it is not disclosure of the facts that we should fear — for justice demands this — but it is the doctors's own estimate of the facts and of his own involvement and culpability which may be entirely erroneous and so minigate against justice for him in a court of law. This is a real threat to future surveys based on voluntary reporting.

Such surveys have, of course, other weaknesses. Dependence on a number of assessors with differing attitudes. Things are made more difficult for these by the fact that there is no standardisation of the terms used. Even the objective viz, 'mortality' needs defining; so, too, do words such as 'avoidable' and 'unavoidable' and 'misadventure'. The diagnosis of 'errors in judgment' is particularly unspecific. Lunn and Mushin's (1982) report gives a good example of this. In the list of the main factors contributing to the 125 deaths classified as 'avoidable', 70% of the deaths were attributable to 'misjudgment'. This could mean anything and could literally cover a multitude of sins. Is misjudgment totally avoidable? Again, it is worth drawing attention to legal arguments concerning this point. When an obstetrician appealed against the finding of the High Court that he had produced brain damage in a baby during a trial forceps by pulling too hard, Lord Denning this time favouring medicine, gave his opinion that because of the nature of the work of a professional man medical misjudgment must not be regarded as negligence. Unfortunately, this generous ruling was also overturned on appeal to the Lords, on a matter of principle.

The Lords allowed the obstetrician's appeal on a matter of simple fact, viz. that he had not pulled too hard. But about 'midjudgment' three of the Lords found that medical misjudgment, in the light of all the facts, might be so misguided as to amount to negligence.

Yet another objection to such surveys is that they have been concerned only with mortality — death

within 24 hours in some, within 6 days in others. They do not reveal information about morbidity and most importantly about a fate worse than death — cerebral damage due to hypoxia during or after anaesthesia. Such patients may live for years in their damaged state which may vary from slight mental deterioration to a condition of such severe disablement that they are unable to care for themselves — spastic and athetoid, unable to communicate with or even recognise their relatives, but not sufficiently damaged as to be considered dead. It was to them that Lord Scarman in an address to the Anaesthetic Section of the Royal Society of Medicine referred in these words: "It is cold comfort for the doctor to be told that his skills and life support system which medical technology now places at his disposal are potent factors increasing the amount of awards against him. But this is the truth. It is much cheaper to kill than to disable: and it may be more merciful. What is the medical profession and what is the law to make of this — the modern doctor's dilemma?" (Scarman, 1981). These the worst of all cases of damage do not surface in the surveys of mortality which have been made to date; nor do they reveal cases of less serious morbidity — not perhaps so terrible, but still flaws in our work.

To summarize this section of my address, our progress towards the elusive goal of safety must depend on measurement, but, are the confidential enquiries dependant on voluntary reporting the best means for so doing? There must be doubt, unless criteria of and terms used for assessment are agreed not only nationally, but in order to permit valid comparison, internationally. There must also be a change in the law respecting the privilege of reports made to surveys of this nature and to other morbidity conferences. Such changes are not altogether impossible as I understand new legislation is now before the State Parliament in New South Wales, and an international meeting to define 'terms' is planned to be held in Boston in 1984. Such surveys, too must encompass morbidity — and this presents real difficulties.

Are there then any other means — any other data available which will act as a base-line from which to measure progress? There are: I refer to the unique experience available in the files of our defence societies. Hitherto, for fear again of breach of confidentiality there has been some reluctance to allow my disclosure of the statistics of accidents reported to these societies, although for very many

years individual cases, made anonymous, have featured in their annual reports. Certainly as far as the Medical Defence Union, on the Council of which I have served for nigh on three decades, is concerned, there is a change in attitude. There is a real appreciation of the enormous educational influence that such data may have and of the contribution it can make to safety. So much so that an information section has been established to make such data available and, as must be the case, these days, a computer installed. Now these data differ from surveys of the type about which I have been speaking in important respects. Firstly, the incidents are reported because the doctor believes that he may be threatened with litigation. Certainly the dominant purpose for which he reports the incident is to seek legal assistance. Only afterwards will the case be included anonymously, of course, in any statistical survey. Secondly the data appears to be of a different order of reliability than that dependant upon voluntary reportage. My colleague, Professor John Utting, has suggested that the information available to a defence society bears a relationship to that thrown up by epidemiological surveys dependant on voluntary submission of reports, as does talking over a confidential problem with a trusted friend to talking it over with your Father Confessor. In the latter case, if you want to be saved you must tell the truth.

Then, of course, reliability is enhanced because conclusions as to the cause of the mistake are arrived at with the help of reports not only from the doctor concerned but also, when necessary, from his co-workers, his assistants medical, nursing and technical, from nursing notes and most importantly from expert opinions. Of course, for one reason or another, not all accidents will be brought to the notice of the defence body, so valid statistical analysis of, for example, mortality is not possible. One can be pretty sure, however, that serious accidents, arising from such every-day manoeuvres as endotracheal intubation or from the misuse of apparatus will be reported and some statistical measure may be formulated.

The aim is to achieve a satisfactory monitor of progress towards safety and I suggest that this data is as good as any, more reliable than most and uniquely capable of standardization for comparison with data similarly produced in the future — for always the basis for reporting the accident is standardised — fear of litigation.

It is not my intention in pursuing my over-all theme of progress towards the unobtainable goal, safety, to

do more than demonstrate how these data may be used. To do this I will compare figures for incidents reported over the 8 years 1970-77 with those over the 11 years 1970-80 and I shall concentrate on the most serious accidents, deaths and hypoxic cerebral damage. Then on the basis of certain assumptions I hope to show how it may be possible to arrive at some elements of the frequency of accidents associated with the commonest causes of trouble, endotracheal intubation and equipment.

In the eleven years 1970-1980 there were 440 deaths and 110 cases of cerebral damage reported to the Union. Of these combined, 362 were due to error (65.8%) and 188 (34.1%) due mainly to misadventure.

TABLE I

DEATH AND CEREBRAL DAMAGE

MAINLY ERROR	1970/1980	1970/1977
Faulty Technique	250(45.5%)	163(47.1%)
Failure Post-operative care	46(8.4%)	33(9.5%)
Drug overdose	31(5.6%)	18(5.2%)
Pre-operative assessment	17(3.1%)	5(1.4%)
Drug Error	7(1.3%)	5(1.4%)
Anaesthetist failure	7(1.3%)	5(1.4%)
Embolism (air and co2)	4(0.7%)	0(0.0%)
	<u>362(65.8%)</u>	<u>229(66.2%)</u>

Table I shows the number due mainly to error reviewed in an earlier report covering 8 years (Utting, Shelley and Gray, 1979) compared with the present series covering 11 years. It would be a bold man who would claim that there is any sign of progress in the three years 1978-1980. Obviously 3 years is too short a time from which to draw any conclusion, but I aim only to show how such data may be used to measure improvement. It will be noticed that in over 45% of cases in which error was involved faults in technique and the misuse of apparatus provided the largest percentage. Broken down: in the 1970-1980 series endotracheal intubation contributed directly to one-third of the deaths and to one-third of the cases of cerebral damage due to faults in technique and misuse of apparatus was responsible for 23% of the deaths and to 28% of the cases of cerebral damage due to faults in technique. Presented in that way, it seems a depressing situation but one must see these figures in perspective. There is reason to think that this defence society covers something of the order of 30,000,000 anaesthetics over the eleven years and assuming that 50% of these involve endotracheal intubation — obviously a conservative assumption — then one may arrive at a statistic of one serious

accident of this nature in every 187,000 intubations. In regard to apparatus mishaps the figure would be one serious accident involving death or hypoxic cerebral damage in every 500,00 anaesthetics. While this may put matters into perspective and point to the basic safety of anaesthetic techniques, I suggest to you that one such accident which is absolutely avoidable is one too many.

There are several examples of how illusory is safety. Perhaps the most striking is the illusion of control and safety given by pulmonary ventilators used during operations. Bearing in mind the desirability of controlling the parameters of pulmonary ventilation, it seemed that the introduction of mechanical ventilators was bound to be an advance in the management of anaesthetised patients. The end-tidal PCO₂ could be planned with some accuracy. Pulmonary ventilation was assured no matter how disturbed was the anaesthetist by attention to such subsidiary matters as writing up notes, adjusting the infusion or checking the monitors. Now Ralph Waters (1944) nearly forty years ago suggested that every advance demands a price, and the price for the pulmonary ventilator has, over these 11 years, been high (Table II). Twenty-six deaths and 9 cases of brain death were directly attributable to the use of ventilators: over 3 of these serious disasters annually. They would not have occurred if a hand had been squeezing the bag. This is, in fact, the largest category of accidents reported which were due to equipment over the eleven years. Even although the statistical incidence of such disasters is low, against I put it to you that one death or worse one case of serious brain damage is one too many and, perhaps, is too high a price to pay for the use of automatic ventilators.

TABLE II

1970-80

ANALYSIS OF 44 VENTILATOR ACCIDENTS

	DEATHS	BRAIN DAMAGE
Disconnected from patient	7	4
Disconnected from gas flow	7	1
Excessive inflation pressure	4	3
Incorrectly connected	4	1
Mechanical failure	2	—
Incorrectly switched	1	—
O ₂ switched off	1	—
Unknown	2	—
Awareness attributable to ventilator 9		

One wonders whether the use of ventilators in the operating theatre does not, in fact, give the anaesthetist too much freedom — freedom which may

result in a loss of concentration on the patient's **clinical** condition. It may even on occasion encourage less contact with the patient — perhaps permitting an anaesthetist to leave the theatre to have a cup of coffee, visit the bathroom, telephone the family. It is, however, a freedom which is dangerously illusory. The use of a ventilator should mean that the anaesthetist has one more piece of equipment to watch. His vigilance must still be constant more so even than when ventilating by hand, for then disconnections, for example, are forced on his attention. But it is not only the risk of some failure by the anaesthetist that is involved in the use of these mechanical aids. The risk may be beyond his control. Spurring and Shenolikar (1978) from the Scientific and Technical Branch of the D.H. S.S. reported that 7 out of 12 accidents with grave consequences attributable to ventilators were due to design or component failure or to faulty servicing — the latter another example of human error but one not controllable by the anaesthetist.

But it might be said, there are alarms which give warning when things are not right. But what may happen then? The anaesthetist can become alarm dependant — alarms may not be switched on, they may be faulty or may not be adjusted correctly. Now all these have occurred. There seems to be an inescapable law. This may be stated as follows: "Each attempt to make things safer by the employment of artificial aids as opposed to direct clinical observation of the patient brings new hazards."

There are other examples: increased sophistication in monitoring is a good one. I could relate cases, but will not because of the confidentiality of cases sub judice, where anaesthetists have been so concerned with monitoring equipment — attention has been diverted from the clinical condition of the patient. He has attributed the alarming signals from the equipment to a need for adjustment in it, calibration and so forth — after all the ventilator seemed to be working well — but all the time the patients condition is deteriorating due to disconnection of the ventilator, which, for some reason, was not appreciated.

Great efforts have been made to ensure that pipe-lines and cylinders cannot be wrongly connected and perhaps we do not believe it can still happen. Table III reveals accidents due to these causes over the 11 years 1970-1980. Even the single hose test can mislead unless an oxygen meter is used to test the gas emerging from the pipe-line.

TABLE III
ACCIDENTS DUE TO INCORRECT PIPE-LINE CONNECTION

	No	DEATH		CEREBRAL DAMAGE	
		%	No	%	
Nitrous Oxide (instead of oxygen)	6	(1.4)	1	(0.9)	
Carbon Dioxide (instead of oxygen)	5	(1.1)	1	(0.9)	
	11	(2.5)	2	(1.8)	
Series: Reports	1,048				
Deaths	440				
Cerebral damage	110				

All these efforts — yet safety ever eludes us. Has one any answer? Well, any answer which is complete would deny the thesis that 'Safety' i.e., 'Complete safety', is, in fact, a mirage — just as is complete safety when walking, riding, flying, cooking or any other human activity. I agree with Lunn and Mushin (1982) when they write in their recent report: "There is probably a rate below which even superhuman efforts will not achieve improvements, but....there is sufficient evidence ... to suggest that the death rate involving anaesthesia has not yet fallen to this low level and indeed we have the impression that we are still far above it." I agree wholeheartedly also with their recommendations, perhaps with a little reservation in respect of the generalisation concerning the elaboration of monitoring: it may sometimes be more dangerous to take the blood pressure frequently during short procedures — such as laparoscopy than to keep a finger continuously on the pulse.

But greater emphasis on clinical observation in training would head my list of recommendation and that is why I welcome our Faculty's review of the first examination to be taken by the entrant to be specialty, with the aims of making its science content limited to what is totally basic and of putting new emphasis on practice and on the **clinical** observation and assessment of patients. A very simple step towards safety would be to emphasize simple aphorisms (Table iv) every morning to all juniors before they start work for the first 3 months of their training and then, as would the Chinese, make sure they can repeat them on demand. Seriously, however, I appeal for the return of disciplined apprenticeship training. And when discipline is a matter of life or death, or worse than death for their patients, trainees must not kick against the goad.

TABLE IV

APHORISMS TO AVOID ACCIDENTS

When in doubt take it out.

Read the ampoule.

Respiratory obstruction is not synonymous with bronchospasm.

Bradycardia may mean hypoxia.

Don't trust your ventilator.

(The young and healthy in hypoxic arrest left alone are by far the best)

Finally, a french proverb is worth remembering and of acceptance as our motto: "The way to be safe is never to feel secure." I can almost feel John Gillies' approval.

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A Note from the Treasurer

At the Annual General Meeting in April 1980 it was decided to raise the Society's subscription to £5.00. This necessitated the revision of Members' instructions to their banks and the result has provided an interesting, but not very reassuring, commentary on the efficiency of these institutions.

A form was completed by Members giving their banks three instructions:

- (1) A once only payment to be made to the Society on receipt of the form by the bank. This sum "topped up" the subscription for 1980 to the new level and varied from Member to Member, according to their previous contribution record.
- (2) A payment of £5.00 to be made on 15th April annually thereafter.
- (3) Cancellation of all previous instructions for payment.

The banks serving 176 members, or about 2/3 of the ordinary membership were successful in carrying out all three instructions correctly. The remaining third failed to comply with one or more of the orders.

All but three banks paid the right initial sum. The date 15th April was chosen to try to avoid the very busy period at the end of the financial year. However, 50 banks paid at another time, the majority at the beginning of April, but some apparently choosing a date at random. Fifteen banks made no subsequent payment or paid the wrong amount, and 9 made multiple payments amounting in two cases to £35.00. Nineteen banks have continued to carry out previous instructions.

The 1980 change in subscriptions was the first to take place for 20 years. I recommend this time interval to my successors!!

L.V.H. Martin

Miscellany

PROFESSOR DONALD CAMPBELL

The news of the election of Professor Donald Campbell as Dean of the Faculty of Anaesthetists of the Royal College of Surgeons of England was received enthusiastically by his many friends and colleagues in Scotland. Donald Campbell, Professor of Anaesthesia in the University of Glasgow and a former President of the Scottish Society of Anaesthetists, was elected to the Faculty of Anaesthetists in 1975 and has served since on all the major Faculty committees. He was chairman of the Education Committee in 1980-81 before becoming Vice-Dean in June, 1981.

The role of the Faculty in the education and training of anaesthetists, and his desire that the views of Fellows in Scotland be recognised, have been two of Professor Campbell's principle interests as a member of the Board of Faculty. As a result, he was largely instrumental in establishing the Scottish

Standing Committee of the Faculty on which he served until his election as Dean (currently he attends the meetings in an *ex officio* capacity).

Although Scotsmen have held the office of Dean previously, this is the first occasion on which a member of the Board of Faculty has been elected to this highest office while working "north of the border". Thus, although the honour is great, the undoubtedly onerous duties of Dean become uniquely so, in the present situation. Under these circumstances, the certainty of support from his wife and family, the Vice Dean (Dr Aileen Adams) and his colleagues across Scotland, becomes particularly pertinent. The members of the Scottish Society of Anaesthetists congratulate Professor Campbell on his election and, in sincerity, wish him every success during his period in office.

William Fitch

J.D. ROBERTSON — AN APPRECIATION

Professor J.D. Robertson retired in November 1982. A native of Stranraer, he qualified in medicine in 1940 and joined the Department of Anaesthetics in the Royal Infirmary, Edinburgh in 1947, after a distinguished war career in the RAMC. He served in West Africa, the Middle East, and landed in Normandy shortly after D-Day. When he returned to civilian practice he was imbued with the concept of the surgical/anaesthetic team, and applied this successfully in the years that followed. He joined a department led by John Gillies, and a fruitful and long-lasting association was formed. When he became head of the department in 1960 he continued the work of his predecessor by firmly establishing an independent academic department of anaesthetics, while still providing an excellent anaesthetic service.

His academic achievements were considerable. He obtained his DA in 1947 and MRCPE, with anaesthetics as a special subject, in 1951. He was elected FFARCS in 1953, FRCPE in 1957 and FRCSE in 1963.

As a MRC clinical research Fellow, he worked in Physiology with Professor Whitteridge on the effects

of volatile anaesthetic agents on baroreceptor function. He was awarded an MD with Commendation for his work in 1955. He was author of the clinical report of the MRC investigation of halothane. Other research interests were the use of ganglion blocking agents for induced hypotension, a field of long and continued interest in Edinburgh, and the investigation of intravenous anaesthetic agents. Many Edinburgh anaesthetists retain an awesome memory of the occasional bizarre effects of gamma hydroxybutyric acid, which remained a favourite of his for many years, despite raids on his specially imported stocks!

In 1968 he was awarded a personal chair in Anaesthetics. His affection for South-West Scotland was clear in his inaugural address, when he argued that the first use of ether anaesthesia in Europe was in Dumfries.

He achieved a great deal in the teaching, training and practice of anaesthesia. In the 1960's he arranged for Faculty written examinations to be held in Scotland, thus saving the candidates much time and money. He was the first Chairman of the

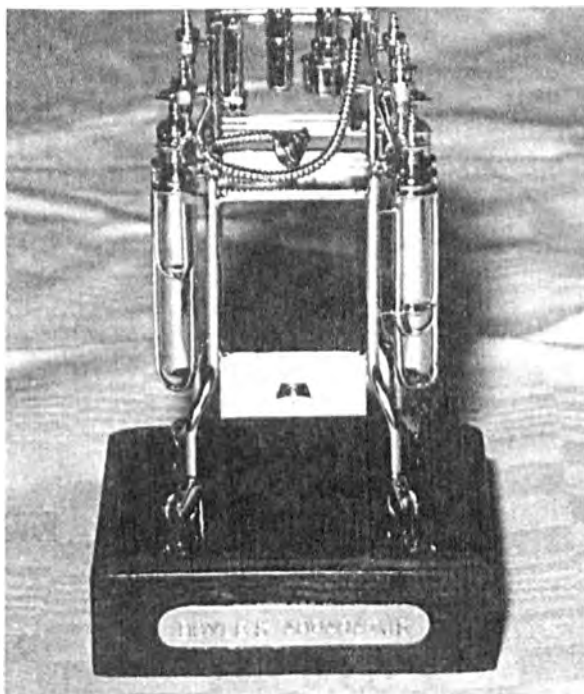
Standing Committee, Scotland of the Faculty of Anaesthetists. He paid visits to many developing countries, such as Nigeria, Sudan and Malaysia and encouraged their young anaesthetists to come to Edinburgh for general anaesthetic training and to obtain the FFARCS. He organised one of the first, and one of the most successful rotational training schemes for registrars, and personally supervised its running for many years. He was instrumental in establishing one of the first specialised units for artificial ventilation in Britain. He served as Secretary of the Division of Anaesthesia of the Royal Society of Medicine, Vice-Dean of the Faculty of Anaesthetists, and President of the Scottish Society of Anaesthetists. In 1979 he was awarded the Pask Certificate of Honour by the Association of Anaesthetists of Great Britain and Ireland for services to international

anaesthesia, and in 1981 the Gold Medal of the Faculty of Anaesthetists.

His skill as a golfer resulted in his regularly winning the departmental golf outings until the advent of a trophy and a new handicap system! He was a witty and entertaining speaker, and his Gillies Lecture in 1981, on the subject of anaesthetics for Royal subjects, will always be remembered by the writer as a tour-de-force.

Above all, however, Jimmy Robertson will be remembered with grateful affection for many people for the kind, thoughtful and valuable guidance he would give to those who sought it. Some of this showed in his persistence over matters he felt to be important, reflected in one of his sayings taken from R.L. Stevenson "be soople, in things immaterial!"

G.B. Drummond



One twelfth replica of "Basket" Boyle's Apparatus presented to Professor Robertson on his retirement. It was made in brass, and then gilded, by Selwyn Johnson and Andrew Ferguson, anaesthetic technicians, R.I.E.

Photo: T. McFelters

ANAESTHETISTS SUBCOMMITTEE OF CCHMS

The subcommittee met twice during the 1981-82 session, and once during the current session, on each occasion with Dr Margaret Heath in the chair.

Many of the topics have continued through all three meetings (and for longer) and many have an England and Wales emphasis.

Developments in Dental Anaesthesia have again run into the problem of shortage of money — on this occasion to fund courses and additional SHO posts.

The committee has drawn up a list of anaesthetists prepared to provide second opinions in the investigation of clinical complaints — in Scotland we have decided not to draw up a list, but to nominate a consultant for each investigation.

Problems continue to arise with requests from General Practitioners for upgrading to Hospital Practitioner Grade when they do not have the support of the consultant staff or who work unsupervised in a Cottage Hospital.

The implications of the Short Report for Anaesthesia have been considered briefly, recognising that the Association of Anaesthetists has set up a working party on this important topic.

The committee has welcomed the recommendation that a Senior Registrar appointed by the HJSUK should sit on it.

At its last meeting the committee considered briefly the topic of no fault compensation and agreed to look at this more fully at its next meeting.

J.A. Davidson

SCOTTISH STANDING COMMITTEE

With the election of Professor Donald Campbell as Dean of the Faculty, Professor Alastair Spence is now convener of the Standing Committee of the Faculty of Anaesthetists and Dr. J.I.M. Lawson replaces him as honorary secretary. Other members are Drs. W. MacRae and D. Moir; Dr. D.B. Scott joins as a Board member living in Scotland. Professor Spence is now Faculty representative on the Scottish Conference of Colleges and Faculties.

The Standing Committee has continued to have before it the Report of the House of Commons Social Services Committee: Medical Education (The 'Short Report'). Without going so far as its original recommendations members agreed that alterations in staffing structure are desirable which would give more sensible rationalisation of staff and particular concern was expressed about the problem of 'chronic' registrar posts with minimal training content. The restructuring of the Fellowship examination has inevitably been on the agenda. During discussion of the timing of the three parts the opinion was expressed that there could be advantages in candidates not having to wait until

their second year before sitting the MCQ. The Committee has also considered the effect of university cuts on postgraduate education with their implications for training; the fact that the NHS has taken over certain academic posts provides no guarantee that it will look after their educational and research functions. Concern has been expressed that the National Panel of Specialists in Scotland cannot comment on the job content of consultant posts. Although not every Panel member is nominated by the Standing Committee, all receive by courtesy a copy of Faculty guidelines.

The meeting of the Scottish REA's and Faculty Tutors before the annual meeting of the Advisory Panel and Faculty Tutors in Bristol this year had to be cancelled because of the rail strike. Their next meeting will be in Glasgow the day before the meeting of the Advisory Panel in Lancaster on 30th June/1st July. To end on an encouraging note, Falkirk and Paisley have been recognised as centres for Higher Professional Training.

J.I.M. Lawson

NMCC — ANAESTHETIC SUBCOMMITTEE

The Subcommittee met once in 1982, on 1st October. The meeting noted the establishment of the NMCC Working Group on Obstetric Anaesthesia, the object of which is to examine current standards of practice in obstetric anaesthesia and analgesia in Scotland. The working group had first been suggested at the Anaesthetic Subcommittee's meeting under Professor Campbell's chairmanship in

December 1981 following comments made by the Subcommittee of Obstetrics in Gynaecology on deficiencies experienced in anaesthetic services; as a first step evidence had been collated by Professor Campbell from various Scottish areas.

There was also some discussion at the October meeting of the Spence Report on anaesthesia in General dental practice; it was noted that the report

had been accepted by the various bodies concerned and was now being implemented. Dr Bruce Scott introduced the Association of Anaesthetists' book, 'Mortality associated with Anaesthesia (J.N. Lunn and W.W. Mushin)'. Its recommendations were welcomed and most of the discussion was centred on how the study could be followed up. The reaction of the Health Departments was awaited and the report would be drawn to the attention of the Specialty Subcommittee for Surgery.

The reorganisation of the substructure of the NMCC also came up for consideration. The NMCC had been discussing a possible reduction in the numbers of its subcommittees with a view to discovering a more efficient means of obtaining

specialist advice, e.g., by the use of more 'ad hoc' working groups. The members of the Anaesthetic Subcommittee felt, however, that the importance of a standing specialty subcommittee lay in its ability to pursue matters of its own interest and if necessary to initiate studies, while a parent committee might fail to pick up important topics of interest which a specialty group would have noticed. It was also agreed that, with the few meetings held and the results achieved, the Subcommittee for Anaesthetics functioned efficiently and had fully justified its existence. As this goes to press we have in fact learnt that we are likely to remain in existence.

J.I.M. Lawson

OBITUARY

Full obituaries of Dr Pinkerton appeared in the major journals shortly after his death. Professor Alastair Spence has contributed the following personal reminiscence:

Herbert Pinkerton was a brilliant student, a competent sportsman and a most charming person. As a young medical graduate he must have had open to him a wide choice of career. It is to the benefit of many of the present generation of anaesthetists that he chose anaesthesia, which he entered via General Practice. By the end of the Second World War he was well established on the visiting staff of the Western Infirmary (and other hospitals) and in private practice. At that time there were many doctors, recently returned from the armed forces, who were seeking specialist training in anaesthesia. The group centred on the Western Infirmary included several who were later to play a significant part in the development of the specialty. They saw in Pinkerton a mentor for whom they had a high regard. He was a natural teacher and clearly enjoyed the opportunity to train.

The Infirmary had no established department of anaesthesia, however, and Pinkerton had no formal role. He set about achieving both, but the path was not easy; there was insufficient support within the hospital community as a whole and something bordering on total opposition amongst one or two influential surgeons. Pinkerton eventually threatened to withdraw from further participation in training and the trainees themselves sent a most effective letter to the Board of Management pointing out the error of

Dr. H.H. PINKERTON

their ways. A department was agreed upon and Pinkerton invited to set it up as a Consultant-in-charge.

I first knew him closely at the beginning of the 1960's when his department was seven years old and he must have been nearly 60. Although there was only a short period of his working career remaining he was a formidable driving force. Specialist rotations and time for private study – now so fashionable – were part of the deal for those who trained under him. Departmental meetings were regular weekly occasions of a remarkably high standard and were obligatory. I was responsible for delaying the start of one of these through failing to finish my last case in time. A few well chosen words were enough to ensure that neither the surgeon or I erred again; another surgeon in an outlying hospital was known to 'phone the Department five minutes before the start of the meeting to make quite sure that his anaesthetist had arrived on time.

Pinkerton was neither flamboyant nor vain, but he took obvious pride in his participation in the various national affairs of the specialty. He was President of the Scottish Society before my time, but I served on the Council of the Association during his Presidency. He was very much in command of the business and a most able chairman. He had an enormous respect for these institutions and for the Faculty of Anaesthetists in which he was a Board member.

In spite of heavy calls on his time outside the hospital Dr Pinkerton remained a superb clinician 'till the day he retired. There was never any possibility of

his retreating to the easy cases, but I never saw him in anything other than the most disciplined order in the operating theatre; he gave anaesthetics in a manner that seemed both effortless and artistic.

In his long retirement, and in spite of failing health, Dr Pinkerton continued to be keenly interested in the specialty and in his department. He followed the journals with care. Only a few weeks before his death he complained that a current piece by a former colleague was incomprehensible; an opinion which

we shared.

Mrs Pinkerton died in July 1981, almost exactly a year before her husband. This took its toll on him, but early in the new year he began a modest social round again. After characteristically careful planning he journeyed to Aviemore, to the Society's Annual Meeting, and much enjoyed himself. It was in keeping with the dignity which he maintained until his death that he concealed his suspicion that he was mortally ill until the week after he returned home.



Dr Pinkerton and Professor Spence at the A.G.M.

Photo: W.R. MacRae

News from the Regions

GRAMPIAN REGION

Possibly the single most noticeable difference in the department now well-established in its new location, is the absence of Mrs. B. Dickson our Secretary who retired in April after 26 years of faithful service to a large number of staff of all grades. Apart from her secretarial duties she played a significant part in the smooth running of our department. We welcome her successor Mrs. A. Gordon who already appears to have settled well into her new post.

We congratulate Drs. John Muir and John MacKenzie on their appointment as Senior Registrars, and Drs. D.D. McLeod and D.M. MacLeod who are now Registrars. We also welcome Drs. S. Pisani, H.K. Tey and G.P. Ramayya who have joined us as Registrars and our establishment was completed by the appointment of Drs. A.A. Campbell, K. Lamb, D. Noble, A. Ratcliff and A.M. Ross as our New S.H.O.'s.

Our resignations during the year have included Drs. J. Orr, M. Babikir, N. Wignarajah and M. Muir for personal reasons. We thank them for their services and wish them well for the future. We also congratulate Drs. G. Duthie on his appointment as Senior Registrar in Leeds and A. McDonald who become Senior Registrar in Newcastle.

The sad saga of our new I.T.U. continues — like a well-worn record the opening has "yet again been delayed", this time because of the current "industrial action".

In the meantime our staff continue to meet the ever-increasing demand on their services in the accommodation provided within the Department of Neurosurgery.

HIGHLAND REGION

Our congratulations are extended to our senior colleague, Dr Alan Booth, on his election to the Presidency of the Society. We wish him an enjoyable year in office.

From a senior registrar post in Aberdeen, Dr Richard Johnston joins us as a Consultant in Inverness and we welcome him warmly. This link

with Aberdeen is appropriate in view of our commitment to the anaesthetic teaching of 4th and 5th year Aberdeen undergraduates which has developed in recent years.

During a year of junior staff stability Dr Linda McIntyre D.A. has been promoted to registrar. Expansion of the Inverness department is offset somewhat by the retiral of Dr David Dick as Limited Specialist anaesthetist to the Ross Memorial Hospital in Dingwall, and the simultaneous opening of the Kessock Bridge; this latter enabling the Inverness Department to take Dingwall under its wing.

The scaffolding is being dismantled from around our 'phase II' ward block which remains reassuringly intact. We presume that, within the film-set-like facade, internal works really are proceeding.

We record with sorrow the untimely death of Dr Ramsay Burnett, much respected G.P. and Limited Specialist anaesthetist, based in Thurso.

SOUTH EAST REGION

There is much to report from the south-east this year. First mention must go to the retirement in November of Professor J.D. Robertson, who has been in the Infirmary Department since 1947. His wise counsel will be sorely missed. The retirement was celebrated in fine style on several (!) occasions, the most notable being the formal dinner in the University's Upper Library attended by 170 friends and colleagues, including many past members of the department. An appreciation of Professor Robertson's career appears elsewhere. At the time of writing it is likely that the chair will continue with the aid of generous funding from the Lothian Health Board, but this is not yet certain so fingers are crossed. In the interim John McClure has been upgraded to temporary Senior Lecturer, and Bruce Scott is acting head of the University Department.

Our congratulations go to Bruce Scott and Willie MacRae on their respective elections to the Board of Faculty and the Hon Secretaryship of the Association of Anaesthetists. We wish them well in these positions of such importance to our speciality.

Congratulations also to Alistair Masson, who has been elected FRCSEd and appointed that College's Hon Archivist, and to Alistair Chambers and Tony Wildsmith who graduated MD at Aberdeen and Edinburgh respectively.

The University Department has continued with its increased commitment to undergraduate teaching, with the in-service FFA courses (which produced good pass rates this year) and with the Postgraduate Board courses on the scientific basis of anaesthesia and on Local Anaesthesia. Ivor Davie has continued to examine in pharmacology for the FFA (with a trip to Kuwait for the external exam in June) and Willie MacRae in the DA. Alastair Masson, Brian Slawson and Tony Wildsmith have been appointed examiners in physiology for the primary FRCSEd.

A notable event was the very successful first general meeting of the newly formed European Society of Regional Anaesthesia. This was organised by Bruce Scott, (who is President of ESRA) Tony Wildsmith, David Littlewood and John McClure and held in Edinburgh during September. It brought to Scotland as speakers many of the major names in local anaesthesia and was attended by over 500 anaesthetists from all parts of the world.

Travel has again been on the agenda with several of our number addressing meetings in Britain including the European Congress. Meetings overseas were addressed by Bruce Scott (Australia and USA), Evan Lloyd (Germany), Tony Wildsmith (Nigeria and USA) and Colin Sinclair (USA). A group from Edinburgh also attended the ASRA meeting in Monterey, California which was considered as a possible venue for a Society visit.

There have been a few staff changes. Jane Freshwater left her part-time SR post (which sadly is not to be continued) at the Western General to become a consultant at Monklands. Gilbert Park is about to take up a Consultant post at Addenbrooke's Hospital, Cambridge. We wish them both well. Alastair Chambers moved sideways to the Lecturer's post which had been unfilled until the Health Board provided funding. David Simpson obtained the resultant SR vacancy. Colin Sinclair has just returned from Montreal, where Fiona Ralley is also to spend a year. John Thorn has returned to the south-west of England and a Bristol based SR post.

The three Consultants in the Royal Hospital for Sick Children are going to spend a year each in rotation to Riyadh to assist in the organisation and development of a paediatric cardiac surgical unit. Dr John Hamilton from Rotterdam has been appointed

to a three year locum to cover their absence. Ian Hudson has already left, and Dick Burtles and Donald Grubb will follow.

Phase I of the new Royal Infirmary has at last been opened. The Infirmary Department is very hopeful of obtaining more spacious accommodation in one of the buildings vacated as a result; again fingers are crossed. Building work has commenced on the second cardiac theatre and looks likely to disrupt the hospital for some time to come. A decision has been made to continue to re-building of the Infirmary on the present site.

Finally Miss D.M. Taylor, who has been a Secretary in the Infirmary Department for 27 years, is retiring. We will miss her greatly, especially her 'witty ditties' that always heralded such important events as Sherry, Xmas and Beach parties. She has been a great help over the years to many Edinburgh based Office Bearers of the Society and we wish her every happiness in her retirement.

TAYSIDE

1982 has been the year of the Vanishing Senior Registrars in Tayside. At one time three out of four were visiting centres abroad in the course of their training. Bob Mann was limited to two months at the Seattle Pain Centre. Joe Sherriff has spent the year in Dunedin and Charlie Allison as a Research Fellow at the Toronto Sick Children's Hospital.

During his year away Dr. Allison has been appointed to a consultant post at Stracathro Hospital. The vacancy follows the retirement of Dr James Garden following many years of service. We wish Jimmy and Phyllis many happy years yet.

Dr Garden's appointment was wholly at Stracathro but Dr Allison will also have sessions in Dundee. To enable this the corresponding sessions in Stracathro are covered by Melvyn Thomson who arrived in Dundee from Bristol in March. Dr Allison's senior registrar post will be filled by Margery Macnab.

News has just come in that Joe Sherriff has been appointed to a consultant post with the South Cumbria Health District.

Competition to enter our specialty gets tougher every year. Many excellent candidates for Senior House Officer posts have to be turned away. This quality is reflected by their hard work and dedication and by the examination results. In the Dundee

department all those of more than six months standing have now passed the Primary F.F.A.R.C.S. These young doctors have committed themselves to Anaesthesia and it is important that when they have completed their training as they doubtless will we have a staffing structure which can employ them. Let us hope that the leaders of our Profession can get it right for them.

WESTERN REGION

Despite the gloom created by the past months' industrial strife, staffing restrictions and the recent dreadful weather, much has been happening to give encouragement.

Professor Donald Campbell became Dean of the Faculty of Anaesthetists in July, 1982 and we wish him much success in this office.

During the Professor's necessary absence from Glasgow Dr W. Fitch has taken over the day to day running of the University Department. He will be even more fully committed by 1983 as he becomes Editor of the British Journal of Anaesthesia when Professor Alastair Spence retires from this task. Professor Spence has already assumed a new role as Regional Educational Adviser for the Faculty but will be ably assisted by the existing triumvirate of assistant R.E.A.'s, Dr C.S. Cairns (W.I.), Dr Lesley Baird (G.R.I.) and Dr Graham McNab (North Ayrshire). Dr M. Telfer has been elected Chairman of Council of the Intensive Therapy Society.

Good news regarding building projects! Phase I of the Royal Infirmary will open in late November. The Anaesthetic Department has already decamped from the small basement area to much larger albeit windowless accommodation in the new building. Kilmarnock Infirmary finally closed its doors on 18th September and the move to Phase I of the North Ayrshire District Hospital took place. Everything looks very hopeful for the final opening of Phase II in August 1983. So far the general comment is that the new hospital has more plus than minus points, although it has increased in internal mileage. The patients are delighted with their new facilities.

The consultant ranks are expanding. With the appointment of Dr Peter Paterson in January 1981, Monklands reached its originally agreed establishment level of 8 Consultants and 10 junior staff. The situation at Law Hospital is gradually improving with the appointment of Dr Scott Redpath

and very recently of Dr Shamus Thomson. Hairmyres with its expansion at Consultant level has almost severed its umbilical cord to the Victoria Infirmary. Dr Gordon Weetch joined the Department in April 1982 and two recent appointments have been made; Dr Janis Richards, side stepping from Neuroanaesthesia and Dr J Glasser originally ex Glasgow but latterly S.R. in Manchester. The Royal Infirmary will shortly be increasing its establishment by 2 further appointments for the Cardiothoracic unit.

The vacancy created by Dr O.M. Watt (Monklands) has been filled by the appointment of Dr Jane V. Freshwater. Dr Hamish Findlay ex Dundee has been appointed to Stirling. Dr D.A.N. Barran has retired from the Vale of Leven (the retiral parties confirm this) but is continuing to help out with a few sessions. Dr Alistair E. Cameron replaces the position. Dr N.G. Johnston retires from Monklands late November and Dr Douglas Simpson has retired from the Victoria Infirmary. We wish them both a happy retirement. Dr Nancy Rennie (Rutherglen) has retired to domestic commitments and Dr Gordon Hendry (Victoria Infirmary) has opted for early retirement.

Sadly we have to record the deaths of three colleagues; Dr H.H. Pinkerton (late Consultant in Charge, Western Infirmary); Dr W. Ault (retired consultant, Western Infirmary) and very recently Dr D.M. Armstrong (late Senior Anaesthetist, Kilmarnock and Ayresshire).

What other news? Senior Registrar rotations for district general experience have started to Falkirk. Dr Sheila Madson, Registrar at Paisley has been granted a research fellowship for 1 year and is seconded to the G.R.I. She is working with Dr Gavin Kenney on "Computing in Relationship to Anaesthesia".

Others have found time to expand in other fields. In this year's Glasgow Marathon, Drs. Susan McVicar (W.I. Shock Team) and Stan Zimmar (N.A.D.H.) finished in very respectable times and there seems little evidence of any residual side effects, apart from restarting training for next year!

New Senior Registrar Appointments: Dr G.C. Cumming from London has joined the Western Infirmary. Stobhill Hospital gains Dr Joan Prentice, ex G.R.I. at the Southern General Hospital Dr Dora Cossar left to enjoy her new baby daughter and Dr W.T. Frame takes over this appointment. The vacancy created by Dr Alison McDonald's departure as Senior Lecturer to Manchester is shortly to be filled. Drs. Margaret McCulloch and M. Inglis have joined the S.R. team at the Victoria Infirmary.

Photocall



Showing (and wearing!) the Flag. Monterey, California March 1982.

Photo: Courtesy of the American Society of Regional Anesthesia



Scene (pun intended) at the A.G.M.

Photo: W.R. MacRae

**NORTH EAST OF SCOTLAND
SOCIETY OF ANAESTHETISTS**

SYLLABUS 1982—83

Meetings are held at 8.00p.m. in Aberdeen Royal Infirmary, Ninewells Hospital, Dundee, and in Stracatho Hospital, Brechin, unless otherwise notified.

1982

Thursday 30th September - Stracathro

Visit to Glaxo Industrial Laboratories.

Thursday 21st October—Dundee

"Medicine and the Criminal Law of Scotland".

Mr D. Smith, Dundee.

1983

Thursday 24th February—Stracathro

Registrars' Papers

Thursday 31st March—Aberdeen

"Anaesthesia and Maternal Mortality".

Dr. D.D. Moir, Glasgow.

Thursday 12th May—Stracathro

Annual General Meeting and Presidential Address.

**GLASGOW AND WEST OF SCOTLAND
SOCIETY OF ANAESTHETISTS**

CURRICULUM 1982-1983

1982

Friday October 29th:

Combined meeting with Edinburgh and East of Scotland Society of Anaesthetists — in Edinburgh

Tuesday November 30th:

Prof. C.J. Hull—"But is alfentanil the answer?"

1983

Tuesday January 18th:

Members' Night—Presented by members of The Division of Anaesthesia, Royal Hospital for Sick Children.

Wednesday February 16th:

Sir J.W. Black, Director of Therapeutic Research, The Wellcome Research Laboratories.

Wednesday March 23rd:

Presidential Address—Dr. W.S. Dykes.

Thursday April 21st:

Annual General Meeting.

Thursday May 19th:

(Provisional) Golf Outing—Williamwood Golf Club.

Unless otherwise stated, meetings will be held in the Royal College of Physicians and Surgeons of Glasgow, 242 St. Vincent Street, Glasgow.

**EDINBURGH AND EAST OF SCOTLAND
SOCIETY OF ANAESTHETISTS**

SYLLABUS 1982—83

Meetings will be held in the Royal College of Surgeons, Nicolson Street, Edinburgh, at 7.45 p.m. for 8 p.m. unless otherwise stated.

1982

Friday October 29th:

Combined meeting with Glasgow and West of Scotland Society of Anaesthetists in the Royal Infirmary of Edinburgh at 7.00 p.m.

Dr. J.D. Cash, Medical Director of the Scottish National Blood Transfusion Service will be the speaker on—

"Blood Transfusion Developments and the Anaesthetist".

The talk will be followed by sherry and an informal dinner to be held in the Staff Dining-Room, R.I.E.

Tuesday November 16th:

Mr M.P. Ward, Consultant Surgeon, St. Andrew's Hospital, London.

"Recent Lessons from high altitude in China"

Tuesday December 14th:

Members' Night.

1983

Tuesday January 18th:

Dr J.C. Stoddart, Consultant in Charge, Intensive Therapy Unit, The Royal Victoria Infirmary, Newcastle-upon-Tyne.

"Rational Use of the Intensive Therapy Unit".

Tuesday February 15th:

A debate on the motion:—

"That Inhalation Anaesthesia is Obsolete".

For the motion—Dr N. Lees, Glasgow

Against the motion—Dr A.H.B. Masson, Edinburgh

Tuesday March 15th:

Dr Pierre Foëx, Clinical Reader, Nuffield Department of Anaesthetics, The Radcliffe Infirmary, Oxford.

"Anaesthesia and myocardial ischaemia"

Tuesday April 5th:

Annual General Meeting.

Parking is available in Chambers Street and South College Street. Further details of meetings etc., from Dr N.H. Gordon, Department of Anaesthesia, Western General Hospital, Edinburgh. Telephone 031-332 2525.

Registrar's Prize

The Society annually awards a prize of £100 for the best original paper submitted by an anaesthetist in Scotland, holding the grade of Senior Registrar or under. A second prize of £30 or a third of £10 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 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.

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 competitors 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 opportu-

ities to deal with special types of cases or to employ advanced anaesthetic techniques.

3. Papers for adjudication *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.

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 this 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 as to its source: acknowledgement to colleagues etc., should not be included.

This prize for 1982 was won by Dr Ian Armstrong of Edinburgh Royal Infirmary for his paper "A summary of the effects of added vasoconstrictors on spinal anaesthesia with amethocaine".

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