South African Medical Journal : Suid-Afrikaanse Tydskrif vir Geneeskunde

EDITORIAL : VAN DIE REDAKSIE

THE SUPERIORITY OF METHOHEXITAL OVER THIOPENTONE

Can it be that our old friend thiopentone, synonomous with intravenous anaesthesia for a quarter of a century, and successful in surviving the synthesis of over two thousand 'ultra-short-acting' barbiturates in the attempt to find a truly short-acting anaesthetic, is at last to be superseded by the newcomer, methohexital ('brietal', 'brevital')? For it has now been established, in thousands of patients and under adequately controlled conditions in some of the best research institutions in the world, that if 2½% of thiopentone or 1% of methohexital (alternatively 5% of thiopentone or 2% of methohexital) is used for induction of anaesthesia, and nitrous oxide is then added for a standard operation, and if both barbiturates are injected at the same rate, the degree of anaesthesia obtained and its quality *on the average* are quite similar, except that awakening following methohexital is approximately twice as rapid and orientation is faster and more complete than with thiopentone. In South Africa, with its lack of good recovery-room facilities, these are indeed significant factors. An undeniable corollary is that thiopentone should not be used at all any longer in ambulant patients, such as those undergoing minor dental procedures.

Claims like the above were made unjustifiably for so many predecessors of methohexital, notably for buthalitone, methitural, and even the steroid hydroxydione ('viadril', and later 'presuren'), that one has become inclined to suspend judgment on initial claims as in the case of 'improvements' on morphine. Moreover, thiopentone is so firmly entrenched in modern anaesthesia that patients ask for it by name, and hospital administrators order it in bulk without any qualms. There is however nothing at all sacrosanct about thiopentone. On the contrary, Keating[1] noted in 1956 that intravenous anaesthetics cause as many sudden unexplained deaths as did chloroform, and Dobkin and Wyant[2] list extensive reviews from which it is clear that the estimated death rates from intravenous anaesthetics have been conservative. The administration of thiopentone and hexobarbitone to casualties at Pearl Harbour in 1941 was described as 'an ideal form of euthanasia'.[3] But even if overdosage is avoided in the shocked patient, who is exquisitely sensitive to thiopentone, a number of research workers[4-8] beautifully illustrated the sudden deterioration of the compensatory circulatory mechanisms and the relatively poor adjustment to sudden blood loss which is characteristic of thiopentone anaesthesia. Howland and Papper[7] noted the particularly hazardous properties of thiopentone in neurosurgical conditions; and in obstetrics, thiopentone passes readily from the maternal blood stream into the foetus, intoxicating those who are premature or at all depressed.[8]

Weyl *et al.*,[9] as well as Barron and Dundee,[10] found that methohexital lacks the depressant effect of thiopentone on the cardiovascular system, while Green and Jolly[11] found it ideal for ambulant dental patients.

The local irritant action of methohexital is unquestionably less severe than that of equipotent concentrations of thiopentone; on the other hand some authors were impressed by a higher incidence of excitatory phenomena, although these were readily controlled by either nitrous oxide or premedication with an opiate. This latter observation is of great interest in that it favours Claude Bernard's view of a century ago, supporting the idea of an opiate for pre-anaesthetic medication, rather than Beecher's view, according to which a barbiturate is safer and more rational.[12]

The greatest champion of thiopentone through the years, John Dundee, has just published a review (in collaboration with Barron[10]) in which they confirm the findings (discussed above) of leading research workers elsewhere, notably of Eckenhoff in the United States and Wyant in Canada. We nevertheless look forward to publication of results from a South African author, since methohexital has been under investigation at all the main university hospitals in South Africa for some time.

Unlike halothane, which is in essence a fluorinated chloroform with all the dangers of great potency and with only a slightly better therapeutic index, all anaesthetists in South Africa, whatever their status, will be pleased to add this new and truly 'ultra-short-acting' oxybarbiturate, methohexital, to the repertoire.

1. Keating, V. (1956): *Anaesthetic Accidents*, p. 136. London: Lloyd-Luke.
2. Dobkin, A. B. and Wyant, G. M. (1957): Canad. Anaesth. Soc. J., **4**, 295.
3. Dundee, J. W. (1956): *Thiopentone and other Thiobarbiturates*, p. 146. London: Livingstone.
4. Hershey, S. G., Zweifach, B. W., Chambers, R. and Rovenstine, E. A. (1945): Anesthesiology, **6**, 362.
5. Zweifach, B. W. and Hershey, S. G. (1949): Surg. Gynec. Obstet., **89**, 469.
6. Beecher, H. K. (1945): Ann. Surg., **122**, 807.
7. Howland, W. S. and Papper, E. M. (1952): Anesthesiology, **13**, 343.
8. James, L. S. (1960): *Ibid.*, **21**, 405.
9. Weyl, R., Unal, B. and Alper, Y. (1958): Surg. Gynec. Obstet., **107**, 588.
10. Barron, D. W. and Dundee, J. W. (1961): Brit. J. Anaesth., **33**, 81.
11. Green, R. A. and Jolly, C. (1960): *Ibid.*, **32**, 593.
12. Beecher, H. K. (1959): *Measurement of Subjective Responses*, p. 260. New York: Oxford University Press.

DIE KONGRESPROGRAM

Die algemene, tweejaarlikse, mediese kongres wat gedurende die week 24 - 30 September in Kaapstad gehou word, is die voortsetting van 'n lang en trotse tradisie in die geskiedenis van ons mediese beroeps- en akademiese lewe in Suid-Afrika. Deur al die jare heen is hierdie tradisie volgehou, en aan daadwerklike en entoesiastiese ondersteuning van die kant van die lede van die Mediese Vereniging was daar nooit gebrek nie.

In sekere opsigte het ons omstandighede wat betref die hou van kongresse egter verander. Binne die raamwerk van die Mediese Vereniging het daar gedurende die afgelope paar jaar 'n groot aantal gespesialiseerde groepe ontstaan. Hierdie groepe funksioneer as nasionale groepe binne die Vereniging, en hulle maak dit dus moontlik vir sulke groepe soos die chirurge, interniste, pediaters, ginekoloë en obstetrici, hospitaal-administrateurs, algemene praktisyns, ens. om hul eie groepsbelange te behartig. Afgesien van die praktiese en professionele aspekte van hul werk, wat lede van die groepe met mekaar bespreek, hou hulle gereeld groepskongresse. Na die groepskongresse kom dan die lede van die groep, en hulle nooi dikwels vooraanstaande geneeshere uit ander lande om aan hul kongresse deel te neem. Sommige van hierdie groepskongresse het in die verlede al 'n besondere hoë standaard bereik, soos ook wel blyk uit

die gepubliseerde werk van lede van die groepe wat van tyd tot tyd in spesiale uitgawes van die *Tydskrif* geplaas word.

Die vraag ontstaan of daar nog plek vir 'n tweejaarlikse *algemene* mediese kongres is. Laat ons dadelik sê dat ons aan die antwoord op hierdie vraag hoegenaamd geen twyfel het nie. Daar bestaan nog altyd 'n dringende behoefte aan so 'n kongres. Die algemene kongres skep die geleentheid vir die breë lae van die mediese professie om nog as 'n *eenheid* op te tree. In 'n tyd van versplintering en in 'n tyd waar spesialisasie en die algemene praktyk dreig om middelpuntvliedende kragte te word, verteenwoordig so 'n kongres 'n eenheidsbeginsel en 'n saambindende faktor. Die betekenis van die kongres in hierdie verband kan nie oorskat word nie.

Daarby bied die kongres die geleentheid vir algemene besprekings oor onderwerpe waarin lede van alle groepe belang stel. Die onderwerpe vir die voltallige sittings is ‚Diabetes' en ‚Die Versorging van Bejaardes'—onderwerpe wat daarop bereken is om die belangstelling van alle geneeshere te prikkel. Daar sal by hierdie kongres ook die geleentheid wees vir uitgebreide gekombineerde samesprekings oor sulke onderwerpe soos respiratoriese versaking, antibiotiese middels, chemoterapie, kruisinfeksie, en afsluitende bloedvattoestande. Hierdie onderwerpe is van prominente belang vir lede van verskillende subgroepe. Ook is daar die geleentheid vir die nasionale groepe self om te vergader, en vir hul lede om bydraes te lewer in seksievergaderings wat net vir hulle bedoel is. Die kongres is dus in werklikheid 'n algemene kongres wat terselfdertyd voorsiening maak vir die bevrediging van die behoeftes van selfs die mees gespesialiseerde lede van die professie.

As hooggeplaaste besoekers word onder andere verwag dr. J. H. Sheldon van Wolverhampton, Engeland, wat 'n deskundige is op die gebied van die versorging van bejaardes. Hy is ook president van die Britse Geriatriese Vereniging. Prof. M. Rachinilewitz, dekaan van die Fakulteit van Geneeskunde van die Hebreeuse Universiteit, Jerusalem, sal ook teenwoordig wees en deelneem aan die kongres. Die formele opening van die kongres sal deur die eerste President van die Republiek van Suid-Afrika waargeneem word.

By die kongres sal daar ook 'n wetenskaplike uitstalling wees. Hierdie onderneming staan onder die leiding van dr. H. O. Hofmeyr, en die vooruitsigte is dat dit van 'n besondere hoë gehalte sal wees. Daar sal verder 'n uitstalling van stokperdjies wees, 'n mediese en chirurgiese uitstalling, en 'n omvattende uitstalling van farmaseutiese produkte en mediese instrumente en apparaat. Reëlings word getref vir uitvoerige beeldradio-uitsendings van verskillende soorte operasies. En Kaapstad sal sorg dat sy tradisie van gasvryheid weer tot sy reg kom—daar sal 'n kongresbal wees, 'n banket, 'n burgemeesterlike onthaal, geleentheid vir deelname aan allerhande sportsoorte, uitstappies, en spesiale onthale vir die vrouens en ander familielede van dokters wat die kongres bywoon.

In hierdie tye van spanning en drukte wat deursypel tot haas alle vlakke van ons lewe, verteenwoordig 'n kongres soos hierdie dié soort menswaardige aktiwiteit wat in sy wesenlike aard positief en opbouend is. Die wêreld het behoefte aan hierdie soort aktiwiteit. Laat ons die geleentheid om deel te hê aan sulke skeppende optrede met gewillige hande en warm harte aangryp.

AUDIO-DIGEST FOUNDATION TAPE-RECORDING SERVICE

On 25 March 1959 Dr. F. A. van Heerden of Bergville, Natal, wrote (in a letter to the Editor): 'It would appear to be an established practice in the USA to have interesting medical lectures recorded on tape and to make the tapes available, for a small consideration, to members of the medical profession. This procedure would be of great value to those of us who live in the country and who cannot enjoy the privilege, as our city colleagues do, of attending lectures by some of our learned teachers or of well-known visitors from other lands. Perhaps you would consider ways and means of instituting a similar service in this country'.

Since the publication of Dr. van Heerden's letter, two interesting developments took place. Firstly, the Cape of Good Hope Faculty of the College of General Practitioners was established. Among many other important services rendered by this Faculty, they now run a tape-recording service for members of the College. The firm Smith Kline and French Laboratories has kindly and generously assisted the College in making this service possible.

Secondly, the firm Squibb Laboratories introduced a unique service to members of the medical profession in South Africa by making available on free loan for individual or group listening, tape-recorded reviews of current medical literature and scientific lectures prepared by the Audio-Digest Foundation, a non-profit making subsidiary of the California Medical Association. Squibb Laboratories subsequently made the generous donation of the whole of their recorded Tape Library to the Medical Association on the understanding that the Association would be willing to continue the service. The Medical Association have now become subscribers to the Audio-Digest Foundation Tape-recording Service.

These recordings cover a wide field of interest to all members of the medical profession and medical students, and include, amongst recordings by guest lecturers, some by the leading men of medicine and surgery in the United States of America. The five-inch reels of tape provide about 1 hour of the most interesting and enjoyable listening to a well-chosen selection of expertly summarized articles from the world medical literature. Not only are the articles read with the clarity and resonance of an expert reader, but they also include experts summing up important points in their own special fields.

The tapes are received at regular weekly intervals, and the new releases as well as back numbers from the existing Tape Library are available on free loan from the Association. Further information about the subjects and series which are available, as well as any other information in this connection, is obtainable from The Business Manager, Medical Association of South Africa, P.O. Box 643, Cape Town.