TRILENE AS AN ANALGESIC IN LABOUR

REPORT OF THE ROYAL COLLEGE OF OBSTETRICIANS AND GYNAECOLOGISTS

BY

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An account of the investigation into the possible use of trilene by midwives as an analgesic in labour has been issued by the Royal College of Obstetricians and Gynaecologists. The report does not seem to have received the publicity in the medical press which it demands. A standard method of administration by means of the modified Freedman's inhaler was adopted and efficacy, effect on labour, and safety for mother and child were investigated.

Results of Investigation

The results, in brief, arrived at under these headings were as follows:

Efficacy.—Adequate relief can be given to a high proportion of cases—76% to 89%—without any special skill upon the part of the administrator. The degree of analgesia provided was superior to that obtained from gas and air by Minnitt's method.

Effect on Labour.—No evidence was adduced of any adverse effect upon length of labour, forceps rate, or obstetrical interference rate. No case of diminution of uterine contractions due to trilene was recorded, but in three cases out of 1,168 unexplained delay might have been attributable to the analgesic. A small proportion—4.6%—of patients became uncooperative mainly because they became too sleepy to push in the second stage. This incidence did not appear to have any relation to the duration of the trilene analgesia.

Safety to Mothers.—In the group to which trilene alone was given there was one maternal death—a rate of 0.86 per 1,000—and that on the fourth day of the puerperium in a patient with mitral stenosis. In marked contrast the death rate was more than doubled—1.06 per 1,000—in the group to whom no analgesic or anaesthetic of any sort was given.

The conclusion, as published in the report, that "there is no evidence in this series that the standard method has any influence on the maternal mortality rate" might even be described as an understatement. The paragraphs which follow this conclusion deal with the possible effects upon maternal respiration and pulse rate. No ill effects upon respiration were noticed. Possible alterations in pulse rate are referred to, but comment here is not possible since the details published are insufficient. The information given is unconvincing because the amounts of trilene administered vary to an inexplicable and almost unbelievable degree. It is difficult to reconcile 9 ml. of trilene in twenty-eight minutes, 7 ml. in three and a quarter hours, and 7½ ml. in a little more than ten minutes.

Effects on the Foetus

Foetal Pulse Rate.—The criterion of foetal distress was taken as slowing of the foetal heart rate to a hundred or below. This occurred in 3 cases among 1,168 to whom nothing else but trilene was given. The opinions reached were not unanimous. There were 18 cases in which the point arose, but in all but the three mentioned above other factors were present, such as difficult labour or the use of other non-volatile analgesics in addition to trilene; furthermore, 11 out of this 18 occurred in the same hospital, and the observer of these cases considers that the possibility of some effect on the foetal heart rate must be borne in mind.

Asphyxia Neonatorum.—Some degree of asphyxia occurred in 3.9% of babies where trilene alone was used, but a considerably higher proportion was noticed if pethidine had been administered previously.

Stillbirth Rate.—There were 25 stillbirths, again among 1,168 patients, but in no case was the analgesia considered in any way responsible. This gives a stillbirth rate of 2.14 per 1,000. In a series of 2,040 patients to whom no analgesia or anaesthetic of any sort was given the stillbirth rate was 71.56 per 1,000. The final conclusion was that there was no evidence to show that trilene influenced the stillbirth rate in any way.

Neonatal Death Rate.—In the three groups of cases investigated the lowest neonatal death rate—5.13 per 1,000—was obtained in the series of patients to whom trilene alone was given. Where no analgesic at all was used the rate was 35.94 per 1,000, but this high incidence is explained by the inclusion of a large number of premature labours. In the group to which other analgesics as well as trilene

were given, a figure of 11.80 per 1,000 was found. The conclusions were again that trilene had no influence on the neonatal death rate.

Final Conclusions

In the final summing up the observers expressed their opinions on whether the use of trilene by unsupervised midwives trained in this method would be safe. The majority—eight in number—were of the opinion that it could be safely employed with great benefit to the mother, and stated that they would be quite happy to be responsible for a district in which the use of trilene by midwives was allowed. Two were of the opinion that further investigations were necessary and that in the hands of midwives without supervision it might be used for longer periods than was commonly the case during this investigation; and two considered it unsuitable for domiciliary midwives on account of its effect on the foetus and the production of a non-cooperative state in the mother.

In spite of this large majority and of the evidence produced, the final recommendation of the observers was that this method should not be made available to unsupervised domiciliary midwives. The reasons actually given in the report are:

(1) The limits of variation of the trilene vapour/air mixture delivered by the apparatus are far too great.

(2) Under less ideal conditions or by deliberate misuse these limits can be caused to vary still further.

(3) As a result of the above and also due to varying tolerance in different individuals cases will occur where the mother will pass beyond the stage of co-operative analgesia into a state of uncooperative stupor. This has occurred in the best of hands, and in the case of less skilled supervisors this condition might easily be taken to a state of anaesthesia.

In writing this précis every effort has been made, and I think successfully, to avoid divorcing subject-matter from context, thus conveying any false impression or biased view. Certain points deserve emphasis; the most striking, perhaps, is that the lowest mortality rates in both mothers and babies are found in that group of patients to whom trilene alone was administered. So far as maternal mortality is concerned this is a finding to which attention has been drawn before, and it is of the utmost importance that this aspect of the use of analgesics should be recognized. The low stillbirth rate is extremely interesting but cannot, of course, be attributed entirely to the use of analgesics.

The adverse part of the report relates to non-cooperation of the patient due to excessive stupor and the danger of this passing into a state of anaesthesia, together with the varying strength of the trilene vapour delivered by the apparatus. It was felt that these disadvantages might be still further increased by unsuitable home conditions or by deliberate misuse. The three cases of non-cooperation and three of alteration in foetal pulse rate constitute no greater proportion of such complications than is found in patients to whom no analgesic is given.

No one is anxious to press for an analgesic which would increase the risks to mother or infant, but the outstanding features of this report are that with the use of trilene mortality rates show an absolute decline. A certain amount of risk has to be taken in childbirth anyway, and it would appear reasonable to suppose that the risks of using trilene, such as they are, would at least be offset by the consequent reduced mortalities. A risk is taken every time an anaesthetic is administered; fatalities have been reported even under gas for removal of teeth, but no one would demand minor operations being carried out without its use. Is it reasonable to take for granted that midwives would deliberately misuse the apparatus by placing the bottle in hot water or would adopt other illicit means to increase the dosage? My experience of them does not support such an idea for a moment. If the practice is known to exist, surely it can be remedied in some way other than at the cost of human suffering?

One is forced to the conclusion that the investigation upon which the report from the Royal College of Obstetricians and Gynaecologists is based produces all the evidence in favour of a trial of this method being made. I must repeat that eight out of twelve observers were of the opinion that it could be safely so used; the majority of them (number not given) stated that they would be quite happy to be responsible for a district in which trilene was available to domiciliary midwives. We have no alternative analgesic the practical application of which is so

widely possible. I would ask, therefore, that districts be chosen in which a clinical trial can be carried out upon a much wider scale than the scope of the recent investigations allowed. I believe the results would more than justify the undertaking.

We must ask ourselves whether the doubts of the few or the slight risks they envisage should prevail and thus deprive thousands of women of the relief so greatly needed. Let those who have expressed their readiness to shoulder the responsibility be allowed to take action without further delay to rectify a state of affairs which is causing national anxiety.

STRATEGY OF HEALTH EDUCATION

TELLING THE PUBLIC

The subject of a symposium arranged by the Public Health Department of the Middlesex County Council on March 14 was "The Principles and Technique of Informing the Public." The all-day meeting was attended by the public health and other staff of the council, and medical officers and health visitors from neighbouring authorities. The words of Lord Derby, who was Prime Minister in 1866, stood at the head of the programme: "Health instruction is even more essential than health legislation, for the best laws are waste paper if they are not appreciated and understood."

Dr. W. HARTSTON, deputy county medical officer of health, who presided, said that the purpose of the symposium was to give the Middlesex authorities some guidance on health propaganda. The people most in need of health education were not people of the highest intelligence nor with any wide range of ideas; they belonged to that 30% who were in grades 4 and 5 of the five intelligence groups in the Army intake during the later years of the war. Therefore the educational appeal must not be pitched too high.

Health education, Dr. Hartston continued, was bound to be a somewhat disappointing business. "Many are taught, but few learn." But if it could be imparted satisfactorily and acceptably it would rid us of most of our avoidable afflictions. He pointed to the success obtained with diphtheria immunization. That could be said to be the result of teaching and propaganda. He mentioned Harrow in his own county, with a population of over 200,000, which in the years 1946-8 had no deaths at all from diphtheria, and in 1948 no cases; yet he supposed Harrow had its share of the above-mentioned 30%. Dr. Hartston suggested that time might be bought on Radio Luxembourg to "call all lumbagos"—or any other class. This suggestion was opposed by Dr. CHARLES HILL, the next speaker, on the ground that people would say, "What is Middlesex County Council up to? Can't we keep our own backaches?"

Personal Contact

The Radio Doctor began by saying that in all forms of health education the fact must be reckoned with that the vast majority of people in this country, while they had a lively interest in ill-health, had relatively little interest in the maintenance of good health. The purpose of health education was to modify that attitude. Too little was known about the prevention of disease. The public was apt to assume that there was a mass of knowledge which, but for the reluctance of those who possessed it, would be available for general assimilation. The sad and depressing truth was that there was really very little knowledge. It was perhaps no longer true that practitioners were "brought up on the rare to go out and treat the trivial," but pathology dominated the curriculum, and physiology had a long way to go before its rightful position was achieved.

Dr. Hill doubted whether health education for the over-forties was worth while. Habits of life and conduct, of eating and drinking, were then firmly laid down, so that it was beyond the power of the most enthusiastic health educator to jerk them out of their routine path. As for the means of health education, he thought that exhibitions, like lectures, were largely a waste of time, attended for the most part by the converted. As for posters and leaflets, there had been an immense improvement in recent years. Especially commendable were posters which had a touch of humour, like those

of Fougasse for the Central Council for Health Education. But the most effective medium was the spoken word—spoken by the doctor or health visitor. He hoped that eventually the burden of work on the doctor would be eased so as to give him more opportunity for these personal contacts.

For broadcasting on health subjects, or indeed on anything else, Dr. Hill laid down some simple rules: (1) Take advantage of the fact that people are interested in ill-health, and use ill-health as an opening for passing on to more positive instruction. (2) Don't despise small and unambitious jests. Don't be afraid of saying something which might not be wholly approved by an audience of medical practitioners. (3) Never mind Sir Ernest Gowers: talk English as you ordinarily talk it.

The Written Word

Mr. MACDONALD HASTINGS, editor of the *Strand Magazine*, discussed the value of the written word, remarking that what sounded well very seldom read well, and vice versa. He looked with more toleration than some on the popular press. He saw in its sensational headlines and comic strips not the signs of declining popular intelligence but the emergence into relative literacy of a population which previously had read next to nothing at all. He even excused the inaccuracy with which medical matters were often handled in the lay press. Four-fifths of it was the profession's own fault. Not once in a thousand times did a newspaper set out to print something that was false. The errors arose from the speed with which newspapers were published, the enthusiasm of individual reporters, and the absence of satisfactory liaison between the medical profession and the Press so that there were no rapid means of obtaining an authoritative opinion.

In the general discussion, in which several health visitors took part, it was suggested that the county council should have a whole-time health education officer, not necessarily a medical man. Suggestions were made for sample surveys, also for area group studies, the group being formed of medical officers, nurses, health visitors, and school teachers. The final word was with a dental officer, who pleaded that, while there might well be education directed to the prevention of caries, there should be no propaganda for more dentistry—at present.

MENTAL HOSPITAL RECORDS

A conference of the Psychological Medicine Group of the Association was held at B.M.A. House on March 7, with Dr. W. G. Masefield in the chair, principally to discuss the question of statistical returns from mental hospitals. Dr. C. P. Blacker, who has played a considerable part in devising the new system of records, said that he must not be regarded as responsible for all the final features of the system. He would have liked to see some of the questions differently framed, and he regretted the use of a hospital index card as a substitute for a case-sheet front page.

Turning to the hospital index cards now in use, he discussed the genetic and demographic questions numbered 20 to 29. The first question, concerning twins, scarcely required comment; the value of twins for genetic research was universally recognized. Another question asked whether the parents were related by blood. It ought to have been specified in the handbook of instructions that first-cousin marriages were here intended. The question was capable of bringing to light new forms of mental defect, or perhaps of disorder, in which recessive genes played a part. Question 22 asked whether the patient was related by blood to his first spouse; the question was limited because to have brought in second or later spouses would have introduced too many complications. But the question had an important bearing on the amount of consanguinity, which varied in different localities. With regard to the next question, which asked whether the spouse had been dealt with under the Acts, a wider net might have been cast by asking whether the spouse had ever been treated by a psychiatrist; but questions of interpretation of "psychiatrist" would have arisen, and there was much to be said for confining questions to simple factual alternatives.