

"More Modern Concepts of Anaesthesiology (Anaesthesia) In Childbirth"

or

NATURAL CHILDBIRTH vs. ANAESTHESIOLOGY IN CHILDBIRTH

(As requested by your recent letter to the Editor in this Journal).

by A. F. PASQUET, M.D., C.M.

"He that cometh to seek after knowledge with a mind to scorn and censure shall be sure to find matter for his humor, but none for his instruction."—Bacon

"Sarcasm is the language of the devil; for which reason I have long since as good as renounced it".—Carlyle

These and other sayings are brought to my mind by your "Letter to the Editor" of January 30, 1962, Volume XIV, No. 3, signed "A Doped Baby", which by this very signature the author seems to be proving the point he is attempting to refute.

However, my purpose is not to respond to sarcasm in like substance. I have been asked to write a paper dealing with the more modern concepts of anaesthesiology in childbirth. (Henceforth in these articles I shall use the term anaesthesia rather than anaesthesiology. It is shorter and will really convey the same impression). But before attempting to describe modern methods of anaesthesia, I find it necessary to try clear up some misconceptions or misrepresentations in the "Letter".

In the first paragraph the suggestion is made that only very old and inadequate evidence is given in favour of natural childbirth and ends the paragraph by stating, "This fact alone notwithstanding other reference made to anaesthetics in the book, leads one to suspect that the philosophy of 'Natural Childbirth' as advocated here at Dalhousie has as its basis, opinionated views rather than documented fact." In his modicum of research on the subject the author of the letter having reached the above conclusion decided to prove his point by suggesting that the reasons for the "Natural Childbirth" teaching at Dalhousie was based entirely on a 1938 reference. I doubt very much that that is the case. As a matter of fact I know of no authority who will not agree that the least interference in childbirth is probably the best, at least when natural childbirth is honestly and reasonably carried out.

For example, L. Stanley James in 1960 review article (listing 144 references)¹ states "A historical survey of obstetrical anaesthesia indicates that the pendulum is swinging from an era of excessive use of drugs, toward one of minimal medication. With a dramatic reduction in both maternal and infant mortality over the last fifty years, better antenatal care and greater education of the public, childbearing no longer conjures up the traditional terrors of the past. Improvement in the mental attitude of the mothers is one of the major factors contributing to this trend.

Hitherto great attention has been paid to pain relief and other pharmacological actions of various drugs were neglected. As a result we are only now beginning to appreciate how analgesic agents can prolong labour and indirectly exert a deleterious effect on the fetus."

Other authors, Otto C. Phillips, et al, in their 1961 review of 455,553 live births² write, "Although at the present time optimal obstetric management for most normal vaginal deliveries is dependent upon the use of some anaesthesia, we must recognize that these deliveries could very well be accomplished safely for both mother and baby without the use of any anaesthetic or analgesic adjuncts. As other factors in obstetric mortality are each year being more certainly controlled, anaesthesia, most of the time not a valid necessity, has been suspected of playing an increasing important role."

Thus we see that although anaesthesia is often necessary in obstetrics it does have its disadvantages as shown by these and numerous other references, which at the same time refute the allegation made in the second paragraph of "The Letter".

"If Dr. Atlee would lead the reader to believe that there has been no advances in obstetrics in 20 years, this is within his realm, but it seems unjust that he imply that such is the case in the field of anaesthesiology." There is, of course, no such implication by Dr. Atlee, but I was amused by this paragraph, and it brought to my mind a statement by J. S. Crawford in his book on *Obstetric Anaesthesia* (1959)³:

"The national maternal and infant mortality rates have been falling in a gratifying manner during the past *twenty years*. These declines have resulted from improvements in many lines of therapy, notably in the combatting of sepsis and shock, but not standards of anaesthesia."

It's all a matter of interpretation, but I am not here trying to belittle the advances in anaesthesia or its role in obstetrics. On the contrary I am the first to recommend anaesthesia in obstetrics when indicated. There is a happy middle road in most such medical controversial subjects, but travelling along it can only be impeded by the destructive criticism implied in "The Letter".

In the uncomplicated case we all agree that true Natural Childbirth as advocated by Grantley Dick Read, and in "The Gist", is the method of choice, and that, in the more complicated operative deliveries, the most experienced anaesthetist should be present. Disagreement occurs in the wide range between these two extremes. Just where and when should natural childbirth make way to proper anaesthesia? It is, of course, a matter for obstetrical decision, but I most emphatically believe that over-supplementing natural childbirth with various analgesics and anaesthetic agents by untrained personnel is a most dangerous practice.⁴ Thus C. B. Courville⁵ writes: "Evidence has accumulated that the more sedation and anaesthesia that has been

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administered, the more likely it will be that the infant will be born in a state of apnoea. Moreover, the length of this period of apnoea is proportional to the degree of narcosis produced. It must be recognized that apnoea per se is probably not significant in the great majority of cases. But there are nevertheless two inherent dangers. The first danger lies in the possibility that, together with the increased depth in narcosis, the interoccurrence of some other factor, such as prolonged or difficult delivery or excessive haemorrhage, may superimpose two situations which add up to a serious degree of anoxia. The second danger lies in the fact that often this additional factor may be totally quiescent clinically so that the birth is presumed to be normal when it is not".

How much more likely is this to occur where these agents are administered by untrained personnel in the delusion that it is part of natural childbirth? Therefore in our modern setting, surely, the conditions and the teamwork in our labour and delivery room should be such as to ensure that whenever True Natural Childbirth no longer provides the ideal conditions for both mother and fetus, then proper anaesthetic equipment and trained personnel are immediately available to take over.

Having agreed that Natural Childbirth is the method of choice for removing a child from its mother's womb, and having conceded that in certain cases, there are reasons for not undertaking this technique and still in others there comes a time where Natural Childbirth must be abandoned in favour of delivery with anaesthesia. Then the next and most vital problem is "How does one decide who are the mothers on whom Natural Childbirth should not be thrust and who are the ones in whom it should be abandoned and when".

To assist you future obstetricians in this decision, let us tabulate the indications for the use of anaesthesia in childbirth:

I. ELECTIVE ANAESTHESIA.

The decision can be made well ahead of the time of delivery and proper preparation carried out. In some of these cases it may only be necessary to have the anaesthetist go with the obstetrician to administer the anaesthetic only if and when required.

A. MATERNAL INDICATIONS:

1. The mother is psychologically unsuitable for, or unwilling to deliver without anaesthesia; in spite of thorough prenatal preparation and education. Undue pressure should never be used to make her conform.

2. Associated Maternal Diseases:

(a) Heart disease.

(b) Diabetes.

(c) Respiratory Diseases.

3. Planned Caesarian Section.

4. Severe Toxaemia and Eclampsia.

B. MATERNAL AND FETAL INDICATIONS.

1. Known disproportion.

2. Primip-breech (Many heartaches will be avoided if an anaesthetist is right there when the head gets stuck).

C. FETAL INDICATIONS.

1. Known severe malformation. It is kinder to a mother to be asleep when monsters are born.

II. EMERGENCY ANAESTHESIA.

When Natural Childbirth is proceeding and suddenly conditions change, maternal and/or fetal life suddenly become imperilled, then an anaesthetist should be quickly available and anaesthetic and resuscitation equipment ever ready.

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¹"In vitro assessment of Commercial Contraceptive Jellies and Creams"; MacLeod, J.; Sobrero, A. J.; Inglis, W.: J.A.M.A. 176:427, 1961.

A. MATERNAL INDICATIONS.

1. Acute toxæmia and eclampsia, occurring after the onset of labour, under Natural Childbirth.

2. Cardio-vascular collapse or shock. (Any type: Haemorrhagic, neurogenic, or both, as in some cases of ruptured uterus, pitocin shock, etc.)

3. Loss of emotional control during labour or delivery. This may occur quite suddenly and require immediate control.

4. Manual removal of placenta.

5. Extensive repair, particularly of tears of the cervix extending into the broad ligaments.

B. MATERNAL AND FETAL.

1. Abnormal presentation: e.g., Deep transverse arrest, breech extraction, brow and face presentation, etc.

2. Anomalies of uterine function: e.g., Placenta prævia, abruptio placenta, prolapsed cord, maternal hypotension, etc.

C. FETAL INDICATIONS.

1. Fetal distress, whatever the cause.

The above is a rather unusual classification but it is a functional one, which may be of some use when in doubt.

This classification should also enable one to suggest the recommended techniques as well as the contraindicated techniques of analgesia and anaesthesia for each group. This will be the subject for part II of this "paper".

As this issue of the Dalhousie Medical Journal is the last one for this term, Part II will appear in the fall issue, but can be available to you, the medical students, in mimeograph form within two weeks if you wish.

REFERENCES:

1. L. Stanley James: The effect of pain relief for labor and delivery on the fetus and newborn, *Anaesthesiology*, Vol. 21, No. 4, page 405, July Aug. 1960.
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3. J. Selwyn Crawford: *Principles and Practice of Obstetric Anaesthesia.* Charles C. Thomas, Publishers, 1959.
4. A. F. Pasquet: Obstetrical Anaesthesia. *The Nova Scotia Medical Bulletin*, Vol. XXXIX, No. 2, p. 48, Feb. 1960.
5. Cyril B. Courville: Paranatal anoxia and its residual encephalic lesions. *The Canadian Anaesthetists Society Journal*, Vol. 8, No. 1, p. 3, Jan. 1961.

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