REPORT ON THE USE OF CHLOROFORM CAPSULES DURING LABOUR

BY

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Within the past few months an investigation as to the value of chloroform capsules during labour has been carried out under my supervision at Queen Mary's Maternity Home, Hampstead. Seven qualified midwives have taken part in this investigation, and although a certain number of cases, especially among the earlier ones, have been carried out under my direct supervision, the vast majority have been under the sole responsibility of the midwife conducting the case. Some of us have had previous experience in the use of these capsules, but this investigation has been approached with an open mind, quite unbiased by any preconceived opinion. The conclusions arrived at are based entirely on this series of cases.

The series comprises one hundred cases. They were not in any way selected cases. Each case as it came to the home was taken, only those which required a general anaesthetic being excluded. The ages of the patients varied from 19 to 41 years, and consisted of thirty-nine parous for the first time and sixty-one whose parity varied from the second to the sixth time. In all cases the presentation was either primarily a vertex or one turned to a vertex during pre-natal care.

That the cases were not selected is evidenced by the fact that the series contains several showing obstetrical abnormalities. Among these was one generally contracted pelvis in which spontaneous delivery was effected. Six showed a moderately raised blood pressure with or without albuminuria. One ante-partum haemorrhage due to marginal placenta praevia is also included, while another is a case of twins.

The average number of capsules used was 3.41, which figure includes those used to facilitate the insertion of superficial sutures. The average interval between each capsule works out at 10.16 minutes.

APPARENT EFFECT OF CAPSULES

Following the questions asked on the form supplied by the National Birthday Trust Fund, the observations on the apparent effect of the capsules may be tabulated as follows:

Apparent effect on uterine contractions:

None	84
Decrease	16
Increase	0

Apparent effect on pain felt:

None	5
Some	75
Great	20

Apparent effect on voluntary effort:

None	60
More forcible	3
Less forcible	37

Patient's opinion:

No use	8
Some use	42
Great use	50

A better estimate of the value of these figures may perhaps be obtained from a less detailed analysis. Thus, in 84 per cent. of cases there was no apparent effect on the uterine contractions, whereas only 16 per cent. showed a decrease. In 95 per cent. of cases there was apparent lessening of pain felt, while 5 per cent. showed no difference. Voluntary effort was apparently unaffected in 60 per cent. and diminished in 37 per cent., while in 3 per cent. of cases there was a definite increase.

The patients themselves expressed opinions in favour of the capsules in 92 per cent. of cases, only 8 per cent. considering them of no use. In connexion with this

latter it is interesting to note the various opinions expressed by primiparous patients and multiparous patients. These were as follows:

Primiparae, 39 Cases		Multiparae, 61 Cases	
No use	4 (10.25%)	No use	4 (6.55%)
Some use	18 (46.15%)	Some use	24 (39.34%)
Great use	17 (43.58%)	Great use	33 (54.09%)
89.7%		93.4%	

It is seen from these tables that those in childbirth for the first time appreciated the use of the capsules to almost the same extent as those who had experienced childbirth on at least one previous occasion—that is, 89.7 per cent., as against 93.4 per cent. I must confess to some surprise at this result, as I should have expected the balance of appreciation to be much more on the side of the multipara, and in fact my own observations led me to think such to be the case.

Coming now to the "ill effects." In no case was there any ill effect to the child. Nine of the mothers are described as being very excited under the influence of chloroform, one being said to have become uncontrollable. In six cases delay was noted in the second stage, while there was loss above normal in eight cases during the third stage. It is probable that the use of chloroform contributed to the last two ill effects, though it is difficult to assess to what extent. The haemorrhage in each case responded to uterine stimulants, and could not be classed as serious. In no case did the delay adversely affect the child.

CONCLUSIONS

The results obtained in this investigation, together with personal observation of cases in the series, lead to certain definite conclusions.

In the first place, it would seem to be established that the use of chloroform capsules by midwives in the second stage of labour is both safe and, in the majority of cases, beneficial to the patient—provided, of course, that due care is exercised.

Considering the method of administration several questions arise. One is, When should the first capsule be used? Should it be at the onset of the second stage or some time later? Experience in this series showed that the best results were obtained where the first capsule was given when definite progress in the second stage of labour became evident. Indeed, it would seem unnecessary to start chloroform early if sedatives have been given during the first stage. I would here put forward a very strong plea for the more universal and free use of sedatives during the first stage. Personally, I am convinced that relief of mental anxiety and pain during a stage at which the mother can do nothing useful to help herself is of the utmost importance to success in the later stages.

A further question of vital practical import also arises. Can these capsules be safely used by a midwife conducting a case alone? If not, what assistance is essential? To the first of these questions the answer is, I think, in the negative. The midwife's attention is, and ought to be, concentrated on the proper conduct of the second stage, and cannot, therefore, be divided by any other issue. The answer to the second question is, in my opinion, "Another trained person," and herein lies a practical difficulty in rural districts. Chloroform is certainly a potent drug, and I for one would not consent to allowing any but one trained in its use to administer it, even in the form of capsules such as those used in this investigation. I am convinced that these capsules can be a very real danger to mother and child if improperly used. In institutions such as Queen Mary's Maternity Home and in district work in large towns no great difficulty should arise to prevent their use. But, taking the country as a whole, some organization different from that already in existence seems to me essential if the use of chloroform capsules is to be universally adopted.

I wish to express to the matron and staff of Queen Mary's Maternity Home my sincere thanks for their loyal and whole-hearted co-operation in this investigation, without which it could not have been carried through. Also, I wish to thank the National Birthday Trust Fund for supplying the capsules.