CLINICAL TRIAL OF SYNTOMETRINE, METHYLERGOMETRINE I.M. OR I.V. IN MANAGEMENT OF THIRD STAGE OF LABOUR

by

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The traditional conservative attitude to the management of third stage of labour is changing. The routine administration of an oxytocic with the birth of the head or anterior shoulder is becoming increasingly common and is no longer disputed. Discussion now-a-days centres on the particular type of injection most suitable for routine use.

For long an intramuscular injection of ergometrine before completion of the second stage of labour was recognised as a useful routine measure for the control of postpartum haemorrhage. But it has the disadvantage of a long latent period of approximately seven minutes (Embrey and Garret, 1958; Embrey and Barber, 1963) before the uterus responds. The main advantage of ergometrine is that its action is prolonged and it produces firm uterine contraction.

Oxytocin on the other hand has the advantage of a shorter latent period of 2.5 minutes after intramuscular injection, but its duration of action is shorter than that of ergometrine. Recently, a new oxytocin preparation "syntometrine" containing 5 I.U. of "syntocinon" and 0.5 mg. of ergometrine in 1 ml. ampoule in stable combination has been given a fair trial in reaching an ideal of bloodless labour.

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Material

At Zenana Hospital, Jaipur, during the period (March 1965 to December 1965 and May 1969 to July 1969) a comparative study has been made of 800 cases in four different groups consisting of 200 cases of control (Group I), 200 cases who were given intramuscular syntometrine (Group II), 200 cases who were given intramuscular 0.2 mg. methylergometrine (methergin) (Group III), and 200 cases who were given intravenous methylergometrine (methergin) (Group IV). All blood loss was collected in the kidney tray pressed against the vulva and carefully measured.

The cases studied were unselected irrespective of their age, parity, normal or abnormal labour.

Results

The results are summarised in the following tables:

TABLE I

	Group I	Group II	Group III	Group IV
Postpartum haemorrhage	0%	0%	0%	0%
Manual removal of placenta	Nil	0.5%	Nil	Nil

Postpartum Haemorrhage

In all four series of cases (800) there was not a single case of postpartum haemorrhage (Table I).

Manual removal of Placenta

There was only one case of manual removal of placenta (0.5%) in the intramuscular syntometrine group who had 18 oz. of blood loss during the third stage of labour. She was a 6th gravida and was a case of uniovular twins.

The average blood loss in the syntometrine group and intramuscular methergin group was much less (3.32 oz. and 2.97 oz. respectively) than in the control group (6.052 oz.). The insignificant difference of blood loss in these two groups may be due to the difficulty in accurate estimation of blood loss measured by different members of the nursing staff on duty (Table II).

Duration of third stage

As compared with intramuscular methylergometrine (methergin) there was a trend in the syntometrine group towards shortening of the third stage. The duration of the third stage was least in the syntometrine group (3.55 mts.) and maximum in intramuscular methylergometrine (methergin) (7.46 mts.) (Table III).

Summary

1. The results show that both the incidence and the amount of bleeding in the group of patients given intramuscular syntometrine with the birth of the anterior shoulder were significantly less than in the control group.

2. Intramuscular syntometrine is as effective as intravenous methylergometrine (methergin) in controlling blood loss (3.32 oz. and 3.43 oz. re-

TABLE II

	Group I	Group II	Group III	Group IV
Average blood loss	6.052 oz.	3.32 oz.	2.97 oz.	3.43 oz.

TABLE III

	Group I	Group II	Group III	Group IV
Duration of third stage of labour in minutes	6.81	3.55	7.46	5.8

spectively). Least blood loss is in intramuscular methylergometrine group (2.97 oz.)

3. The duration of third stage of labour in syntometrine group is least (3.55 mts.) and maximum in intramuscular methylergometrine (7.46 mts.). In syntometrine group the blood loss and duration of third stage are almost similar, with little difference, to that of intravenous methylergometrine. This would definitely have the advantage for the midwives and untrained practitioners in conducting a bloodless labour when intravenous therapy is impracticable.

The prophylactic administration of any oxytocin (syntometrine, ergometrine or methergin) if inadvertently injected after the birth of first twin in the case of undiagnosed twin pregnancy, the danger of second twin being lost must be kept in mind.

In our series the prophylactic oxytocin was not combined with the active manipulation of the uterus to express the placenta. We waited for the signs of separation of placenta which still reduced the duration of third stage of labour and the amount of blood loss, as shown in control group (6.052 oz., 6.81 mts.).

References

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