DESAMINO-OXYTOCIN BUCCALETTES IN OBSTETRIC PRACTICE

by

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In recent years oxytocin, is becoming increasingly popular in obstetrics, specially for induction of labour and management of prolonged labour. In induction of labour, till recently, amniotomy alone used to be the standard procedure. But it has been observed that simultaneous or early administration of oxytocin reduces the induction delivery interval minimising the morbidity rate of mother and newborn. Similarly, oxytocin has been the drug of choice in prolonged labour, irrespective of hypotonic or incoordinate uterine dysfunction Turnbull (1971).

Intravenous oxytocin drip has enjoyed the popularity in the above mentioned problems, administered by various techniques, viz, standard drip method, titration method Turnbull and Anderson (1968a) or method adopted in active management of labour O'Driscoll (1969).

In a busy unit like that of Tata Main Hospital, Jamshedpur, where approximately 7,000 deliveries take place annually, the increasing use of I.V. drip has meant extra work load on nursing and medical staff. Therefore, oxytocin administration in the form of buccalettes was considered ideal if the efficacy of such tablets was the same or better, without increasing the hazards of oxytocin administration.

The pitocin buccal tablets have never gained much popularity because of larger dose, discomfort of retaining large tablet in the mouth and uncertain absorption. Moreover, in uterine dysfunction during labour, the buccal tablets have never been considered to be reliable.

Recently Desamino-oxytocin (ODA 914)—Sandoz has had many trials. These tablets are of smaller size in the form of buccalettes and easy to administer sublingually. Weight for weight Desamino-oxytocin has double the activity of pitocin Baumgarten and Frohlich (1967). Therefore, the Desamino-oxytocin was given a trial to assess its suitability as a substitute for oxytocin drip.

The trial was conducted in three parts:

Part I: Buccal tablets alone were used for induction of labour in a very small group of patients and the trial was soon abandoned, as the results were unsatisfactory.

Part II: Buccal tablets were used simultaneously with artificial rupture of membrane for induction of labour.

Part III: Buccal tablets were used in uterine inertia where labour was already established.

In the present report we have studied and compared the effect of Buccal tablets and A. R. M. (Artificial rupture of mem-

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branes) for induction in 70 patients with results of syntocinon drip and A.R.M. in 50 patients.

Procedure

The patient was given an enema in the morning and one tablet of Desamino-oxytocin (50 units) was given sublingually. Before giving the tablet a pelvic examination was done. Close watch was kept on foetal heart rate and uterine contractions; blood pressure and pulse rate were frequently watched. As soon as the first tablet was finished second tablet was given. Minimum interval between two tablets was half an hour. If the uterine contractions were very strong only half a tablet was repeated. A maximum of 10 tablets were given.

Time of the first uterine contraction was noted. Tablet delivery interval was recorded and pelvic examination was done every 2 hours. A maximum of 3 such examinations were done and the results were finally assessed. Baby's Apgar score and postpartum blood loss were noted.

In the series of syntocinon drip pain interval had not been noted earlier as it was a retrospective study. So it could not be compared, but other factors like parity, obstetric history and modes of delivery were compared.

Subjects

Parity: Table I shows that we have used buccal tablets in 20% in para 5 and above as compared to 8% in syntocinon drip. Conventionally we used syntocinon drip less often in grandmultiparae.

Obstetric Complications: There was not much difference in the two series except that we have used buccalettes less often in antepartum haemorrhage compared to syntocinon drip (Table II). This Table indicates that the subjects for the trial were comparable in both series.

Previous Obstetric History: Normally we use syntocinon drip very carefully in patients who have had bad obstetric history but we noticed that buccal tablets could be used safely in such cases i.e. 18% as compared to 8% in syntocinon drip without any untoward effect on the foetus (Table III).

TABLE I
Parity

	Primi	Para 5 & above	Rest
Buccal D.A.O.	53% (37)	20% (14)	27% (19)
Syntocinon drip	44% (22)	8% (4)	48% (24)

TABLE II
Obstetric Complications

	Post-maturity	A.P.H.	Toxaemia	Premature rupture of membrane	Bad obstetric history	Other	Intra-uterine death
Buccal D.A.O.	36% (25)	1.5% (1)	30% (21)	11.5% (9)	3% (2)	18% (12)	0%
Syntocinon Drip	34% (17)	6% (3)	26% (13)	6% (3)	0%	24% (12)	4% (2)

TABLE III
Previous Obstetric History

	Bad obstetric history in past pregnancy	Psychosis	Anaemia	Eclampsia
Buccal D.A.O.	18% (12)	0%	0%	1.5% (1)
Syntocinon drip	8% (4)	2% (1)	4% (2)	0%

Figures in parenthesis indicate number of cases.

Induction Delivery Interval: In buccal tablet series 95% delivered within 12 hours and in syntocinon drip series 85% delivered within 12 hours.

Latent Period of Action of Buccal D.A.O.: In 62% of cases labour pains started within 1 hour, in 34% within 7 hours and in 4% after 7 hours.

Khews Classification of Pelvic Assessment: Table IV shows the pelvic scores. A score of 3 or less was considered to be unfavourable.

Pelvic Score in Buccal D.A.O. Series:

Table V shows that 58 out of 65 i.e. 89% had favourable pelvic score and it was also seen that the patients who were delivered by caesarean section had unfavourable pelvic score. This observation indicates the value of pelvic scoring in prediction of the outcome of labour.

Mode of Delivery: There was hardly any difference except that the indications for caesarean section in buccal series were failed inductions in all cases, whereas in syntocinon drip series the indications were failed induction 66% and foetal distress 34% (Table VI).

Parity of Patients delivered after 12 hours: (Table VII) There was not much of difference in both groups parity-wise.

Acceptability: (Table VIII) indicates the remarkable acceptability of the buccal tablets on the part of both patients and nurses.

TABLE IV
Pelvic Score Shows Classification of Pelvic Assessment

		0	1	2
Cervical effacement	Tubular	2 cm. long	1-2 cms.	Less than 1 cm.
Dilatation of Cx Os	Firm		soft not stretchable	soft, and stretchable
Station of presenting part in relation to ischial spines	Above 2 cms		2 cms. to 1 cm.	1 cm. to Zero

TABLE V
Pelvic Score in Buccal D.A.O. Series

Buccal	1	2	3	4	5	6	7	8	Not recorded
No. of cases	1	1	5	11	26	11	9	1	5

TABLE VI

Mode of Delivery

	Vaginal Normal Delivery	Forceps	Caesarean Section	Undelivered
Buccal	89.5%	4%	7%	1.5%
Syntocinon drip	84%	10%	6%	0%

TABLE IX

Delivered After 12 Hours—Analysis of Parity

Buccal	Primi	66%
	Multi	43%
Syntocinon drip	Primi	57%
	Multi	43%

TABLE X

Acceptability

Patients acceptability	Nurses acceptability	Reaction	Apgar Score
100%	100%	Nil	100% above

Dosage of Buccal Tablets: We used a maximum of 10 tablets. About 50% of patients delivered required 250 units (5 Tablets) or less.

Discussion

In a similar trial conducted by A Czeygielski and Z. Kornecki (1973) of Poland, the authors found 82.5% positive results. Condition of the neonates was good in 88.8%. We had a success rate of 92.5% with good Apgar score in all the babies delivered.

From our trial we can draw the following conclusions. We can say that Desamino-oxytocin is a drug which may find practical application in both augmentation and induction of labour.

Summary

I. It can be freely used in grandmultiparae and in patients with bad obstetric history.

II. No patient in the buccal series required caesarean section for foetal distress.

III. 95.5% of the patients in this series delivered within 12 hours of tablet administration. In syntocinon drip 85% delivered within 12 hours.

IV. Apgar score of the babies born in buccal series was very satisfactory.

V. Buccalettes were effective even in unfavourable pelvic score.

VI. Patient and nurses acceptability was 100%.

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