A COMPARATIVE STUDY OF INDUCTION AND ACCELERATION OF LABOUR BY BUCCAL OXYTOCIN WITH INTRAVENOUS OXYTOCIN

By

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SUMMARY

A clinical trial of 200 patients, 100 by buccal oxytocin and 100 by intravenous syntocinon is presented. Ease of administration avoidance of psychological tension and desirable outcome points to greater scope of its use. There was only marginal difference in induction delivery interval in both groups buctocin and syntocinon cases.

So far success rate is concerned the oral oxytocin is equally effective if not superior to syntocinon drip.

Syntocinon is superior to buctocin in acceleration of labour in late second stage due to shorter leg period.

Introduction

Induction and acceleration of labour is a well accepted procedure in modern obstetric practice. Attempts to induce labour with oxytocic drugs are being done with variable success since last 40 years (up till now). We have been using injectable pitocin or its synthetic analogue by Intravenous drip. This method of induction or acceleration has some drawbacks like immobilization of the patient, discomfort of the needle and in some cases fluid reaction to the patient. The availability of oral pitocin is likely to fulfil this discomfort of the patient.

It was with his purpose that the comparative study of buccal oxytocin with that of I.V. Syntocinon was made.

Recently buccal oxytocin is available in the form of buctocin tablet in a strength of 50 I.U. which is easy to administer and dissolve completely in 30-120 minutes. In comparison to parenteral syntocinon drip oral route is much convenient, more acceptabe to the patient.

Material and Methods

This work has been done in Darbhanga Medical College and Hospital, in the Department of Obstetrics & Gynaecology in the year 1983-85. About 200 patients were selected 50 for induction and 50 for acceleration in both parenteral as well as oral route. In induction cases, patients were in different age groups, different parity, with different indications. In induction by oral as well as parenteral oxytocin patients were normal pregnancy at term, post-maturity, pregnancy toxaemia, Intra uterine death, premature rupture and leaking membrane and malformed foetus. After selecting the patient, all patients were thoroughly examined including general, abdominal, and pelvic

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examination and their pelvic scoring was done.

Patients were given buctocin tablet 50 I.U. at ½ hourly interval till a satisfactory uterine contraction became established.

Details of the events of labour in 1st, 2nd and 3rd stage were noted, Apgar score of baby after delivery in both groups were noted.

Similar to oral group in parenteral group also, patients were for different indication for induction and in different age groups. Patients were given 5% Dextrose with 2.5 units of Syntocinon in both induction and acceleration cases at the rate of 12-16 drops/minute by gravitational method till satisfactory contraction became established. Any untoward effects were noted like hypertonic uterine contractions, foetal distress, operative interference, and Post-partum Haemorrhage were noted.

Observation

The above Table, shows the number of cases in Buctocin and Syntocinon group. The number of primigravida patients are more in Syntocinon group in comparison to Buctocin Series, whereas number of cases between para 2 and 4 and above 5 are more in buctocin series in comparison to Syntocinon group.

Above Table shows the number of buctocin tablets and units of syntocinon in both induction and acceleration of labour. In buctocin series maximum number of patients required 10 tablets for induction and 4-5 tablets for acceleration of labour. In Syntocinon series maximum patients required 5 units of Syntocinon for induction and 2-3 units of Syntocinon for acceleration of labour.

Above Table, shows the number of normal vaginal deliveries are more in buctocin series in comparison to Syntocinon group in induction as well as acceleration cases. No. of instrumental deliveries were more in Syntocinon cases in comparison to buctocinon.

TABLE I

No. of cases of different parity	Buctocin Group	Total %	Syntocinon Group	Total %
1. Primi Gravida	22	44	28	56
2. Para 2-4	25	50	21	42
3. Para 5 and above	3	6	1	2

TABLE II

Induction of Labour	No. of Buctocin Tablets	1	2	3	4	5	6	7	8	9	10	11	12
	No. of patients	0	0	0	1	6	13	2	3	5	18	0	0
	Syntocinon in units	1-2		2-3		3-4		4-5		5-6	6-7	7-8	8-9
	No. of patients	2		7		7		23		1	10	0	0
Acceleration of labour	No. of Buctocin Tablets	1	2	3	4	5	6	7	8	9	10	11	12
	No. of patients	0	0	4	13	12	11	1	5	8	2	0	1
	Syntocinon in units	1-2		2-3		3-4		4-5		5-6	6-7	7-8	
	No. of patients	8		15		91		9		1	3	1	

TABLE III

Mode of delivery	Buctocin				Syntocinon			
	Induction		Acceleration		Induction		Acceleration	
	No.	%	No.	%	No.	%	No.	%
1. Normal vaginal delivery	34	58	43	86	31	62	40	80
2. Forceps delivery	3	6	4	8	7	14	4	8
3. Caesarean Section	5	10	1	2	6	12	2	4
4. Vacuum application	3	6	2	4	3	6	4	8
5. Undelivered cases	5	10	0	—	3	6	0	0

Discusion

It has been found that indications for induction are almost same in present study and studies carried out by different workers except there are differences in numbers of patient.

In the present study the mean latent period was 43.57 ± 15 minutes in buctocin induction and 38.0 ± 24.15 minutes in syntocinon induction whereas the lag period in buctocin acceleration was 55.4 ± 24.61 and in Syntocinon acceleration it was 32.8 ± 13 minutes.

The mean duration of 3rd stage in both series were almost same but the amount of blood loss in majority of cases in buctocin series was less in comparison to syntocinon series where it was more.

In the present study post-partum haemorrhage was noted in 2 cases in buctocin series and 4 in syntocinon series out of 50 cases in induction group. Incidence of retained placenta was one in both series and manual removal of placenta was also done in one case in each series.

In the present series the number of normal vaginal delivery was 68% and 62% in buctocin and syntocinon induction group whereas in acceleration it was 86% and 80% respectively. It has been found that the incidence of forceps delivery is less in the buctocin series observed by different workers.

The foetal outcome is influenced by the indication for which induction of labour has been done.

The success rates in present series were 80% and 84% in buctocin and Syntocinon cases in induction group and in acceleration cases in both series it was 96%.

The failure rate in buctocin series was 10% whereas in syntocinon series it was 8% in induction group. Failure rate in acceleration cases was almost same in both groups i.e. 4%.

The mean duration of 3rd stage was almost same in both groups but 3rd stage complications and blood loss were more in syntocinon cases in comparison to buctocin cases.

No serious adverse effects were seen in the mother and foetus during induction and acceleration by both drugs. Minor complications like rigor, fever, multiple needle prick and immobilization were more in syntocinon cases.

The biggest advantage with oral syntocinon is that induction can be done without the knowledge of the patients. Whereas if induction is done with I.V. Synto-

cinon and if it fails patient feels demorlised, mentally exhausted at times desperate also, whereas with buctocin may be hazardous for the foetus where suffiicient amount of liquor has been drained out, because it can cause tetanic contractions and severe foetal distress, whereas parenteral syntocinon can be immediately discontinued on slightest untoward effect.

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