

Use of Tramadol as analgesic in normal and abnormal labour

Usha Rani Sharma, R.S.Verma

Dept of Obst & Gyn, and Anaesthesia J.L.N. Medical College & Hospital, Ajmer

Summary: The present study was carried out in J.L.N. Hospital & Medical College, Ajmer to see the effect of Tramadol on relief of pain during labour. Study was divided in three groups, 50 cases in each, Group I – No Drug, Group II – Tramadol, Group III – Tramadol + Buscopan.

Mode of delivery, effectiveness of pain relief and effect on Apgar scoring was observed in all the three groups. There was satisfactory relief of pain in 90% in group II and 94% in group III. The incidence of normal delivery varied from 66% to 84% in group II and group III showing significant effect of Tramadol and combination with Buscopan, without any significant maternal & foetal complication.

Introduction

Pain in labour is unpleasant and sometimes distressing to the parturient. Till date there is no drug that is safe and satisfactory for relief of pain in Obstetric practice.

Drugs have an important part to play in the relief of pain in labour. Many drugs were used for relief of pain such as morphine, pethidine, barbiturates, promethazine, diazepam hydrochloride and anaesthetic agents like trilene, nitrous oxide in combination with oxygen, epidural analgesic but their uses are limited and require skill and supervision. An ideal pain relief agent in labour should be safe to both mother and foetus with satisfactory analgesic potential.

TRAMADOL hydrochloride, a weak opioid antagonist acts mainly through activation of descending monoaminergic pain inhibitory non-opioid pathway (70%). When used during labour it produces a low incidence of respiratory and cardiac depression in neonate and produces effective analgesia in normal and abnormal labour with minimum adverse effect. (Lee et al 1993 and Sarkar B & Mukhopadhyay A.K., 1997)

Material and Methods

The present study was carried out in JLN Medical college & Hospital, Ajmer, Department of Obst. & Gynae in the year 1997.

Inj. Tramadol hydrochloride 100mg I.M. alone and combination of Inj. Buscopan were used in primigravidas in 150 cases. The present study was divided in three groups of 50 cases each.

Group I (n-50): No drug used.

Group II (n-50): Inj. Tramadol hydrochloride 100 mg I.M.

Group III (n-50): Inj. Tramadol hydrochloride 100mg + Inj. Buscopan I.M. (2040 Hyosan Byhyllbroide.)

Observations

Table No. I

Gravida - 1st-2nd

Age varied between - - 20-30 years

20 – 25 years – 70% cases

26 –30 years – 30% cases

Table No II

	Group I	Group II	Group III
Normal (No. of cases)	25 (50%)	28 (56%)	20 (40%)
Post datism	10 (20%)	12 (24%)	20 (40%)
Previous L S C S	4 (8%)	2 (4%)	3 (6%)
RH incompatibility	2 (4%)	1 (2%)	2 (4%)
P I H	4 (8%)	2 (4%)	1 (2%)
Primi with floating head for trial of labour	5 (10%)	5 (10%)	4 (8%)
Total	50	50	50

Table No. III

Mode of Delivery	Duration of labour and mode of delivery					
	Duration					
	Group I		Group II		Group III	
No. of Cases	%	No. of Cases	%	No. of Cases	%	
Spontaneous delivery	33	66	42	84	44	88
	(4-10 hours)		(4-6 hours)		(4-6 hours)	
Forceps delivery	10	20	5	10	4	8
	(11-12 hours)		(7-10 hours)		(7-10 hours)	
L.S.C.S	7	14	3	6	2	4
	(>12 hours)		(≥ 11 hours)		(>11 hours)	

Table No IV

Relief of Pain According to Question Asked

	Duration					
	Group I		Group II		Group III	
	No. of cases	%	No. of cases	%	No. of cases	%
Mild relief	36	72	5	10	3	6
Moderate relief	12	24	43	86	44	88
Effective relief of pain	2	4	2	4	3	6
Total	50		50		50	

Along with good relief of pain as shown in above table the patients were very co-operative at the time of stitching of Episiotomy in Group II and III, due to analgesic effect of Tramadol.

Other Parameters Observed

No significant change in maternal pulse and B.P. except in PIH group rise of B.P. 5-10mm.

Table No. V

Apgar Score	Perinatal Out come								
	Group I			Group II			Group III		
	1	5	%	1	5	%	1	5	%
	minute			minute			minute		
4-6	8	2	16%	6	4	12%	5	5	10%
6-8	8		16%	12		24%	12		24%
8-10	34		68%	32		64%	33		66%

There is no significant change of APGAR in above table in II & III. Only one new born could not be revived in Group II due to some other associated congenital anomaly associated and not related to Tramadol. No maternal mortality was reported in this present study.

Discussion

Tramadol hydrochloride, a weak opioid agonist analgesic, which acts mainly through activation of the non-opioid descending monoaminergic pain inhibitory pathway was given a trial in this study. It was found to be a safe and effective analgesic drug for normal and abnormal labour without any side effect on maternal and neonatal outcome.

Excepting a few, most clinical studies have been performed by German researchers and it was only in early 1990s that more International interest arose on Tramadol as a safe and effective analgesic (Lehmann, 1994). In the present series we observed moderate to satisfactory pain relief during normal and dysfunction of labour in 90% in Group II and 94% in Group III cases. Prasertsawat et al (1985) reported satisfactory analgesia in 78% and 51% by Sarkar and Mukhopadhyay in (1997). Husslein et al (1987), and Kaintz et al (1992) and Sarkar & Mukhopadhyay (1997) observed no adverse effect on mother/ neonates after use of Tramadol. The results of the study are comparable with the above 78%.

There is no significant effect of Tramadol and Buscopan on Neonatal outcome as shown in the above table. These datas are comparable with Suvonnakote et al (1986) and Sarkar and Mukhopadhyay (1997).

The incidence of spontaneous delivery increased from 66% Control to 84% in Group II and 88% in Group III showing significant effect of Tramadol alone and in combination with Buscopan (shown in Table III). The main feature of the study was significant relief of pain and decrease in the duration of spontaneous delivery (shown in Table III). The acceptability of this drug was appreciated.

Conclusion

In conclusion from the above study Tramadol hydrochloride alone or in combination with Buscopan is very effective without any significant maternal and neonatal complication. We conclude that Tramadol hydrochloride can be safely used in labour and as well as in dysfunction of labour.

References

1. Husslein P, Kubista E, Egarter C.: Zeitschnft fur Geburtshilfe, Hnd P. Pentologic 191,234,1987.
2. Kaintz C, Joura E, Obgewsser R, Plackinger B, Gruber W: Zeitschnft fur Geburtshilfe, Hnd P. Pentologic, 196,78,1992.
3. Lee R, Mc Tanish D & Sorkin EM: Drug evaluation, 46(2), p323, Adis International Ltd. Auckland, New Zealand,1993.
4. Lehmann KA: Drugs supplement, 47, Supplement 1P,19. Adis International Ltd. Auckland, 1994.
5. Prasertsawat PO, Herabutya Y, Chaturachinda K: Current Therapeutic Research:40,1022,1985.
6. Sarker B, Mukhopadhyay AK. IJ. Obst & Gyn of India. Vol 47, No.1:42:1997.
7. Suvonnakote T, Obst D, Thitadilok W, Atisook R: J. of Med Assoc of Thailand, 69; 575; 1986.