

Algaphan in Obstetrics

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ALGAPHAN (D-propoxyphene) has been used in obstetrics to shorten the duration of the first stage of labour. This report describes the results obtained in clinical trials of 100 primigravidae in labour.

Materials and Method:—

The study was carried out in the Department of Obstetrics and Gynaecology, General Hospital, Kuantan, Pahang, during the period May 1968 to June

1969. The cases selected were all primigravidae in early labour and the control group were the alternate cases which did not receive any Algaphan. A special protocol was prepared and the patients received the Injection Algaphan intramuscular route after the vaginal examination were carried out and the findings recorded. The dose of Algaphan given was 2 ml. which contained 75 mgm. D-propoxyphene. In the trial group, the patients were only given one dose of 75 mgm. Algaphan.

Results:—

Table 1 Ethnic Group/Age

TRIAL GROUP	Ethnic Group	Age					Total
		15 – 19	20 – 24	25 – 29	30 – 34	35+	
	Malays	6	9	5	2	1	23
	Chinese	7	30	24	2	1	64
	Indians	3	10	—	—	—	13
		16	49	29	4	2	100
CONTROL GROUP	Ethnic Group	Age					Total
		15 – 19	20 – 24	25 – 29	30 – 34	35+	
	Malays	5	9	2	—	—	16
	Chinese	9	37	19	4	—	69
	Indians	4	9	2	—	—	5
		18	55	23	4	0	100

Table 1 shows the Ethnic group and age of the primigravidae under study. In the trial group, there were 23 Malays, 64 Chinese and 13 Indians and in the control group there were 16 Malays, 69 Chinese and 15 Indians. The majority of the patients were below 25 years (65% in the trial group and 72% in the control group).

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Table II Ethnic Group/Injection delivery time

Ethnic Group	Time in hours						
	0-2	+ 2-4	+ 4-6	+ 6-8	+ 8-10	+ 10-12	12+
Malays	9	6	5	2	-	-	1
Chinese	16	24	17	5	1	1	-
Indians	5	4	1	1	1	1	-
	30	34	23	8	2	2	1

Table II shows the Ethnic group and the Injection delivery time. The results show that 64% delivered between 0 to 4 hours, 31% between 4 to 8 hours and only 5% delivered after 8 hours.

Table III Cervical Dilation/Injection Delivery Time

Cervical os dilation	Time in hours						
	0-2	+ 2-4	+ 4-6	+ 6-8	+ 8-10	+ 10-12	12+
os 1 tbs.	1	1	2	3	-	1	1
os 2 tbs.	10	22	10	2	1	-	-
os 3 tbs.	18	9	11	3	1	1	-
os 4 tbs.	1	2	-	-	-	-	-

Table III shows the relationship between the dilation of the cervical os and the injection delivery time. The data showed that the best results are obtained if the cervical os is more than 2 tbs. dilated, and the larger the cervical dilation, the shorter the delivery time.

Table IV Ethnic Group/Total Duration of labour

TRIAL GROUP	Ethnic Group	Labour in hours						
		0-4	+ 4-8	+ 8-12	+ 12-16	+ 16-20	+ 20-24	24+
	Malays	6	11	1	1	2	1	1
	Chinese	10	22	16	8	2	-	3
	Indians	1	7	2	1	2	-	-
		17	40	19	10	6	1	4
CON-TROL GROUP	Ethnic Group	Labour in hours						
		0-4	+ 4-8	+ 8-12	+ 12-16	+ 16-20	+ 20-24	24+
	Malays	-	5	2	5	3	1	1
	Chinese	-	17	31	15	4	1	1
	Indians	-	2	6	1	2	-	3
		-	24	40	21	9	2	5

Table IV shows the duration of labour in the control group and in the trial group. Although the injection Algaphan was given early in the first stage of labour (os 1 tbs., 2 tbs., 3 tbs., or 4 tbs.) in the trial group, 17% had labour lasting 0 to 4 hours and the control group had not a single case with labour lasting less than 4 hours. Further in the trial group, 40% had labour lasting 4 to 8 hours compared to the control group which had only 24%. Table IV clearly shows that the total duration of labour was reduced by Algaphan given in the first stage of labour.

Table V Blood loss in 3rd stage

	Blood loss in ozs.				
	0 - 5	6 - 10	11 - 15	16 - 19	20+
Trial Group	73	20	6	0	1
Control Group	69	22	6	2	1

Table V shows the blood loss in the third stage in the trial and control groups. The third stage was managed in all cases by intramuscular syntometrine with controlled cord traction. From the table it can be noted that the blood loss was slightly reduced in the patients who had Algaphan in labour.

Table VI Apgar score of the baby at birth

	Apgar score											
	0	1	2	3	4	5	6	7	8	9	10	
Trial Group	—	—	—	—	—	—	4	4	3	56	33	
Control Group	—	—	—	—	—	—	5	3	3	55	34	

Table VI shows that injection of Algaphan in labour did not effect the baby as shown by the Apgar scores at birth.

Table VII Type of delivery

	Spontaneous vaginal delivery	Assisted Breech delivery	Forceps delivery
Trial Group	90	2	8
Control Group	90	4	6

Table VII shows that 90% had spontaneous vaginal delivery.

Discussion:—

Algaphan (generic name D-propoxyphene) has the following structure: — 4 — dimethylamino — 1, 2 — diphenyl 1 — 3 methyl — 2 propronyl — oxybutane — hydrochloride. The dosage recommended is 2 ml. which contains 75 mgm D-propoxyphene.

The clinical trial at the General Hospital, Kuantan, had shown it to be a safe drug which is useful to shorten the duration of the first stage of labour. The best time to give it is when the cervical os is more than 2 tbs. dilated.

Algaphan given in the early stages of labour has the following beneficial effects.

- (a) Reduces the duration of the first stage of

labour.

- (b) Alleviates the labour pain.
- (c) Shortens the second stage of labour.
- (d) Has no effect on the baby at birth.
- (e) Has no effect on the third stage of labour.

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