

APGAR SCORE AND ANAESTHETIC TECHNIQUE

by

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SUMMARY

As the vital functions of the new born are different from those of the adult, the choice of the anaesthetic technique should be for the welfare of the new born. While Fox and Houle (1971), and Gandhi *et al* (1976) demonstrated the superiority of spinal analgesia over conventional general anaesthesia, Baraka *et al* (1971), Langrehr (1974) and Rao and Yajnik (1976) found propanidid to be superior to thiopentone in caesarean section.

Propanidid is thus the better induction agent and should be the drug of choice if general anaesthesia is to be administered, otherwise spinal analgesia is still very ideal technique if the patient is otherwise fit for this type of anaesthesia.

Material and Methods

Study consists of 150 healthy women coming for elective caesarean section and admitted in Govt. Hospital for Women, Amritsar and Govt. Medical College & Hospital, Faridkot and were divided into three groups:

Group I: 50 cases—Spinal analgesia was administered.

Group II: 50 cases—General anaesthesia with thiopentone induction.

Group III: 50 cases—General anaesthesia with propanidid induction.

Premedication consisted of Inj. atropine 0.6 mg. intramuscularly 45 minutes before the start of operation.

In groups II and III cases ether was added after the delivery of the new born.

Apgar scoring was done at one minute, three minutes and five minutes interval.

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If the child did not cry immediately resuscitation was carried out by gentle suction, inhalation of liquid ammonia, gentle stroking and stimulation with the tip of suction catheter. None of the new born required intubation.

Observations

1. Age of the patient vary from 21-32 years with the mean age of 25.5 years.

2. 60% were primigravidae, 30% were second gravidae while 10% were third gravidae.

3. Apgar score is illustrated in the Table.

Discussion

With reference to Apgar score, spinal analgesia was found superior to both the techniques as 94% of the neonates obtained score between 8 to 10 at one minute interval as compared to 84% of the new born obtaining score between 8-10 in the thiopentone group and 90% of the new

TABLE

Percentage in Distribution of Neonates and Their Progress Judged Through Apgar Scores in Various Groups

Apgar score	Spinal (in minutes)			Thiopentone (in minutes)			Propanidid (in minutes)		
	1	3	5	1	3	5	1	3	5
10	60	100	100	50	100	100	62	100	100
9	18			20			18		
8	16			14			10		
7	4			8			7		
6	2			4			3		
5				6					

born obtaining score between 8-10 in the propanidid group at one minute interval. Superiority of the spinal technique was also stressed by Fox and Houle (1971); Gandhi *et al* (1976), Sahay, B. H. and Sahay, B. M. (1982). The destruction of propanidid in the body and also by placental cholinesterase should cause minimal foetal depression if at all as compared to thiopentone. This is also supported by Baraka *et al* (1971) and Rao *et al* (1976). Thus 90% neonates obtaining score 8-10 at one minute interval compares favourably with identical incidence of 80-90% for propanidid induction noted by Rao *et al* (1976) and Sahay, B. B. and Sahay, B. M. (1982).

Respiration is more prompt and efficient under spinal and then under general anaesthesia in neonates (Apgar *et al*, 1957; Gandhi *et al*, 1976) and after propanidid, then thiopentone induction (Baraka *et al*, 1971; Rao *et al*, 1976; Sahay, B. B. and Sahay, B. M., 1982).

Nitrous oxide when used for more than 15-20 minutes results in foetal depression which may summate with that of thiopentone. Marx *et al* (1970). So induction delivery interval should be kept minimum if general anaesthesia is to be used.

References

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