OCULAR MANIFESTATIONS OF PARENTERAL ADMINISTRATION OF SCOPOLAMINE (HYOSCINE)*

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CONFLICTING reports of the effect on intra-ocular pressure and pupil size of intramuscular atropine and scopolamine have appeared in the literature. According to Leopold and Comroe (1948) seven out of eight patients showed 1 mm. mydriasis with intramuscular scopolamine. Edmunds and Gunn (1941) found that neither drug had any adverse effect in the conventional pre-operative dosage. Hale (1954) found that the effect of scopolamine was greater, and Adriani (1960) found that both drugs caused mydriasis, atropine being the more effective. Mehra and Chandra (1965) found that in a series of 100 patients who received intramuscular atropine, 0.1 mg. per 14 lb. body-weight, thirteen showed mydriasis up to 2 mm. and nine showed a rise in ocular tension up to 3 mm. Hg (Schiötz). The present study concerns the effect of intramuscular scopolamine, and was prompted by the need to find a safe pre-medication for glaucomatous patients requiring drainage operations under general anaesthesia.

Material

The investigation was carried out in 100 patients with normal pupil size and intra-ocular pressure and ten patients with glaucoma. They were of both sexes and their ages ranged from 10 to 50 years.

Method

The patients were examined by artificial light. They were asked to look at a distant object while the pupil size was measured. The ocular tension was measured with a Schiötz tonometer with three weights.

The pupil size and ocular tension were noted before and 15, 30, 45, and 60 min. after the intramuscular administration of hyoscine hydrobromide 0.06 mg. per 14 lb. body-weight.

Results

In the 100 normal subjects, the pupil size increased in 9 per cent. and the intra-ocular pressure in only 5 per cent. In the ten glaucomatous patients no change occurred. These results are set out in the Table.

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TABLE
RESULTS IN 100 NORMAL SUBJECTS AND 10 PATIENTS WITH GLAUCOMA

Series	No. of Patients	Sex	Mydriasis (mm.)		Rise in Intra-ocular Pressure (mm. Hg)	
			None	0-2	None	0-2
Normal	48	Male	43	5	45	3
	52	Female	48	4	50	2
	100	Total	91	9	95	5
With Glaucoma	5	Male	5	0	5	0
	5	Female	5	0	5	0
	10	Total	10	0	10	0

Conclusion

It appears that scopolamine affords a safe method of premedication before general anaesthesia in cases of glaucoma. Mydriasis and increased ocular tension occurred in a very small percentage of normal subjects.

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