THE USE OF HYPOTENSION IN ANAESTHESIA FOR EAR, NOSE AND THROAT OPERATIONS

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Opinions differ vastly and there has been considerable controversy about the usefulness and the advisability of using hypotensive drugs as an adjunct to surgery. Let us, therefore, at the outset say that, within our very limited experiences (some 370 cases in all), we have formed a very favourable opinion of their use in anaesthesia for ear, nose and throat surgery. Of the papers published so far, few seem to have mentioned their wide field of application in these operations. Scurr and Wyman (1954) record the use of Arfonad in 20 operations upon the mouth, nose and throat surgery. Of the papers published so far, few seem to have mentioned their wide field of application in these operations. Stirling (1955) described 20 fenestrations using hexamethonium bromide with excellent results.

We have found that the use of this technique provides two great advantages. Firstly, during operation a comparatively bloodless field has made it much easier for the surgeon to see exactly what he is doing, and that has almost halved operating times. Secondly, there has been no pre-operative packing of the nose, which saves the patient a great deal of discomfort. Nor has there been any postoperative packing, which again has greatly benefited the patient. Almost all patients are able to breathe nasally on the first postoperative day and their comparative well-being has to be seen to be believed.

We started using hypotension in this series in 1951 with hexamethonium bromide as the drug of choice, and achieved considerable but not very consistent success. Since April 1954, we have used Arfonad with much improved (and very much more controllable) results.

The total numbers of each drug and the operations for which they were used are given in table I. The results obtained are given in table II. A grading of “V. Excellent” denoted an almost completely dry field. “Excellent”, “V. Good”, “Poor”, and “Failure” indicated lessening degrees of success.

It will be seen that Arfonad gave a very much greater percentage of success than did hexamethonium bromide and for that reason we have now completely abandoned the latter.

ADMINISTRATION

Anaesthesia for all cases has consisted of thiopentone 500 mg, gallamine triethiodide 80 mg, followed by pethidine 25 mg and nitrous oxide and oxygen via a cuffed endotracheal tube. In only a few, and those very “tough customers” has a minimum of trichlorethylene been added to the circuit.
All patients were operated upon in a steep reverse Trendelenberg position, some of them tilted before and some after the administration of the hypotensive drug. It seems to make little difference which of these methods is adopted.

The hexamethonium group were all given the drug in divided doses, but all except the first few of those who received Arfonad were given it in a drip of 1 mg Arfonad per ml of normal saline. The latter method has been found to give a less uneven level of hypotension with the short-acting drug.

Arfonad is excreted far more rapidly than hexamethonium and often the blood pressure has returned to its pre-operative level within a few minutes of stopping the drip and flattening the table. On a few occasions the blood pressure has dropped
to as low as 40 mm Hg or less, but has risen quickly by stopping the drip and/or flattening the table.

No ill effects have been noticed from such severe drops, although we do not aim to reduce the systolic pressure below 50–60 mm Hg.

OPERATIVE TECHNIQUE

The submucous resections of nasal septum, and indeed all the nasal operations were done without any preliminary packing. The blood loss in most cases was considerably less than in noses which had been well packed with cocaine and adrenaline before this technique was used, and the surgeon’s visibility correspondingly increased. On conclusion of the operation the space between the flaps is sprayed with a solution of thrombin and this has been found all that is necessary to hold them together. The great advantage is that there is almost no postoperative congestion of the nasal mucosa and the patients can breathe through their noses with comparative ease on the first day.

In Caldwell-Luc operations the maxillary antrum scarcely bleeds at all and the stripping of the thickened mucosa becomes a much less exacting task.

Trans-antral ethmoidectomy (Horgan’s operation) used to cause a great deal of haemorrhage and often it was deemed unwise to do more than one side at a time because of the great blood loss. Since using this technique we have always been able to complete both sides without trouble or upset to the patient.

Mastoidectomies are made much easier and take considerably less time because of the lessened oozing from the bone. Up to date we have seen no case of reactionary haemorrhage.

SUMMARY

An account is given of 257 cases of ear, nose and throat operations using hypotensive technique, 182 with hexamethonium bromide and 75 with Arfonad.

The successes with Arfonad were very considerably greater than with hexamethonium and the action of the former much less prolonged.

No case of reactionary haemorrhage was seen.

The point we wish to stress is that patients are immeasurably more comfortable when this technique is used, with no packing of the nose, than with the older methods.

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REFERENCES