He mentions, too, quoting Patey, that the recurrence may arise from small satellite tumours independent of the main one.

The incidence of parotid tumours, other than pleomorphic adenomas, makes any other clinical diagnosis than this unwise (except the obvious cancer), and their pathology demands that any surgical treatment should be wide excision.

McKenzie (1948) has reiterated that Bailey (1948) is inaccurate in his description of the gland as a bilobed structure. We have not found Bailey's analogy of the facial nerve as the filling in a parotid sandwich of any value in removing parotid tumours, but our experience of facial-nerve branches and filaments makes us accept McKenzie's analogy of the parotid growing like a creeper, weaving itself into the meshes of a trellis-work fence (the facial nerve). Kidd (1950) has described identification of the cervical branch of the facial nerve in the submaxillary triangle as the first step to preserve all the facial nerve. From dissections, however, this nerve appears small and might be difficult to find. One of us (W. K. J. W.) has noted that it commonly lies deep to the platysma $\frac{3}{8}$ in. (1 cm.) behind the angle of the jaw, but this is inconstant.

Method

It seemed to one of us (H. S. S.) that the sensible method to preserve the facial nerve and yet, without reservation, resect widely any superficial parotid tumour would be to expose first the main trunk of the facial nerve soon after its emergence from the stylomastoid foramen and then from this large strong trunk to work forward to the main divisions and filaments as need be. This idea is the basis of the method we describe.

The facial-nerve trunk runs $\frac{1}{4}$ in. (0.6 cm.) below the free edge of the tympanic plate, as determined by one of us (T. McM. B.), and the exposure of the free edge of the tympanic plate is the key to the operation (see Figs. 1 and 2).

The parotid and temporo-mandibular regions are infiltrated with local analgesic to help haemostasis. The incision is liberal, extending from Macewen's triangle a fingerbreadth behind the pinna and

just below the external auditory meatus down to the lower border of the mandible; flaps are dissected. The outer border of the tympanic plate is exposed and the main trunk of the nerve found $\frac{1}{4}$ in. (0.6 cm.) below; the nerve is dissected anteriorly, and in this forward sweep there is no confusion between fine filaments of nerve, fibrous tissue septa, and tiny ducts. The tumour is now excised widely, and after haemostasis the wound is closed with an intracuticular stitch and drained.

We first performed the operation on September 20, 1950, on a woman aged 70. Our clinical diagnosis was an encapsulated parotid tumour, but histology showed a carcinoma—a fitting confirmation of Willis's description of the pathology of these tumours and apt support for our thesis of wide safe removal.

Summary

A new method of surgical treatment of parotid tumours is described.

The main trunk of the facial nerve is exposed $\frac{1}{4}$ in. (0.6 cm.) below the free outer border of the tympanic plate as the first step in the operation to excise widely the tumour and yet preserve the nerve.

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Medical Memoranda

A Relaxant of Very Brief Action

A recent important paper (Paton and Zaimis, 1950) pointed out that the myoneural blocking agents in clinical use as relaxants could be classified, according to their mode of action, into two groups: (1) true curarizing agents—e.g., D-tubocurarine chloride; (2) depolarizing agents, of which group decamethonium iodide is the only member in common use. The different properties of these agents in anaesthetic practice have recently been reviewed (Scurr, 1951).

Bovet (1949) has reported an extensive pharmacological investigation of a large number of synthetic "curarizing" agents. One of these compounds, closely related to succinyl-choline and designated 362 I.S., was considered suitable for clinical trial, and Valdoni (1949) reported briefly on its use in a small number of cases. This substance is di-(β -ethyl dimethyl-ammonium-ethyl) succinate diiodide, and belongs to the depolarizing group of agents. Recently a small supply (4 g.) of this drug became available, and it has been possible to test its effect in a small series of cases.

Effects

After the rapid injection of 50–75 mg. into the average adult the first signs are evident in about 20 seconds. The onset of muscular paralysis is marked by transitory tremors and flickering of muscles similar to but more pronounced than those noted with decamethonium iodide. After 30–40 seconds the effect of voluntary muscular paralysis is maximal, and complete respiratory paralysis may occur. Recovery takes place approximately two minutes from the time of injection, full respiratory activity being rapidly regained. In no case has the duration of paralysis exceeded 2½ minutes.

FIG. 1.—Photograph of exposed left side of face.

FIG. 2.—Diagram of exposed left side of face.

In view of this extremely brief duration of action, great precision in dosage is neither possible nor necessary, and one aims at giving a fully adequate dose. No significant circulatory changes or other side-effects have been observed.

Endotracheal Intubation

The agent has been used for this purpose in 20 cases, the technique being as follows: 10 ml. of 5% thiopentone is injected and followed by 75 mg. of the drug; after a pause of 30-40 seconds, during which oxygen may be administered, intubation is performed.

In all cases satisfactory conditions for intubation have been obtained. In view of the very evanescent relaxation, it is essential to carry on promptly with an inhalation anaesthetic after the intubation; a supplement such as pethidine enables the endotracheal tube to be well tolerated in the light plane of anaesthesia.

Electric Convulsion Therapy

The ideal relaxant for the attenuation of electrically induced convulsions should have a very brief action so as to ensure prompt recovery, avoid the dangers of prolonged respiratory depression, and reduce the amount of skilled supervision required afterwards.

362 I.S. has been used on 18 occasions for this purpose. It has been possible to ensure attenuation in the highest degree, and yet in every case to have full respiratory activity present within 2½ minutes from the start of the injection. It had been hoped that, in view of the very rapid action of the drug, the subjective feelings of fear and suffocation which accompany curarization in the conscious state might be avoided and render unnecessary the use of an accompanying dose of barbiturate. Unfortunately this is not the case, but it is possible to reduce greatly the dose of thiopentone. As a result of the rapid recovery from the relaxant and the small dosage of barbiturate, the patients become ambulant very much earlier than with any other method.

The technique used is as follows: 75 mg. of 362 I.S. is injected rapidly intravenously and is promptly followed by 3-4 ml. of 5% thiopentone. There follows a pause, during which oxygen may be administered, until 40 seconds have elapsed from the start of injection; the electric convulsion is then induced.

Other Uses

The duration of action of this relaxant is obviously too short to meet the surgeon's requirements. It might be useful, possibly in repeated doses, to facilitate peritoneal closure. Theoretically it might be possible to prolong the paralytic effect by administering the drug combined with neostigmine. In view of the small supplies available, it has not been possible to explore these methods of using this relaxant; however, it does seem to be ideal for the attenuation of electrically induced convulsions, and further investigation along these lines seems highly desirable.

I am indebted to Dr. Gerald Garmany and Dr. Audrey Ferguson, of the Psychiatric Department, for co-operation, and to Dr. J. H. W. Smith for valuable assistance.

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Acute Intestinal Obstruction from Foreign Bodies

The following two cases of intestinal obstruction may be found of interest.

Case 1

A married woman aged 73 had a history of attacks of recurrent acute cholecystitis. On October 15, 1947, cholecystostomy was performed for localized abscess secondary to perforation of the gall-bladder. Further attacks of acute cholecystitis occurred, and on October 12, 1949, the previous scar was excised, cholecystectomy performed, and a catheter passed down the common bile duct into the duodenum. There was free oozing from the gall-bladder bed, into which was placed an "oxycel" pack. The wound was closed, with drainage. There was some mild post-operative wound infection; this subsided, and she was discharged on November 9.

On November 19 the patient was readmitted as an emergency, suffering from acute intestinal obstruction. On November 21 operation was performed by Mr. A. York Mason. The small bowel was acutely distended, and there was an obstruction 3 in. (7.5 cm.) from the ileo-caecal valve consisting of a putty-like tumour, about 4 in. (10 cm.) long, within the lumen of the bowel. The bowel was incised and a rolled pack of oxycel removed. The bowel was sutured.

The patient made an uninterrupted recovery, and was discharged on December 14.

Comment.—The oxycel pack which had been inserted to the gall-bladder bed 38 days previously had evidently ulcerated through the duodenum and caused obstruction in the terminal ileum. Examination of the pack showed that there had been practically no absorption, and I believe that the use of these packs in situations in which they cannot be removed is contraindicated.

Case 2

A married woman aged 65 had had bilious attacks since 1939, and was seen in the out-patient department on November 17, 1950. There was some tenderness in the epigastrium, and the cholecystogram failed to outline the gall-bladder.

On December 22 the gall-bladder was explored and appeared to be normal. The duodenum was incised and a mass of plum-skins, 2 in. (5 cm.) in length and 1 in. (2.5 cm.) in diameter, was found adherent to the walls and blocking the second part of the duodenum. The duodenum was sutured and abdomen closed.

The patient made an uninterrupted recovery and was discharged on January 10, 1951.

The specimen consisted of a mass of rolled-up plum-skins in which some incrustation had occurred.

Comment.—The second part of the duodenum was rather short, and the junction of the second and third parts of the duodenum was rather more prominently curved than normal, so that the mass of plum-skins had been unable to pass into the third part of the duodenum, giving rise to symptoms simulating chronic cholecystitis.

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The house governors and matrons of a number of hospitals in Suffolk have been told that they must not economize by diluting milk (*Daily Telegraph*, September 25). As soon as it was learnt that this was being done the local hospital management committee instructed them to "effect alternative economy." The chairman assured the committee that, whatever else they saved money on, they would not do it by cutting down on food.