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## THE OPERATIVE TREATMENT OF PITUITARY TUMOURS.

ALTHOUGH the site of pituitary tumours is, not merely metaphorically, but actually, almost within touch of the rhinologist's territory, it is only within the last three or four years that the nasal specialist has begun to take more than a perfunctory interest in this little region. The reason for this neglect is, of course, that pituitary disease rarely causes symptoms with which the rhinologist is called upon to deal. It is true that long before the days of radiography StClair Thomson had postulated pituitary tumour as a common cause of an uncommon disease, viz. cerebro-spinal rhinorrhœa, and that epistaxis and anosmia are also occasional symptoms of pituitary tumour. But the fact remains that pituitary lesions do not arrest the attention of the rhinologist as they do that of the ophthalmologist, for instance, when they interfere with vision, or that of the neurologist when they induce a rise in intra-cranial pressure, or that of the general physician when they cause errors in metabolism.

Thus operations upon tumours of the pituitary body when first they were attempted were quite naturally performed by the general surgeons attached to the neurological clinics, and they, quite as naturally, selected as their route of access the subtemporal or subfrontal craniotomic approach. To Paul of Liverpool belongs the merit of having been the first to carry out Horsley's original

suggestion of sub-temporal decompression, which operation, with or without partial extirpation, was for a time the only one resorted to for the relief or arrest of increasing visual impairment due to the pressure of the pituitary tumour upon the optic tracts or commissure. Of late, however, while decompressive craniotomy is still the recognised mode of relieving general increase in intra-cranial pressure, on the other hand, where local pressure symptoms, visual for the most part, are the most obvious and urgent features in the case, the less serious operation by the nasal route has largely become the operation of choice, in the first instance at all events.

The possibility of relieving the local pressure effects of a pituitary tumour by operating through the sphenoidal sinus was first suggested by Giordano as far back as 1897, but the suggestion was not put into practice until 1907, when Schloffer's enterprise marked a new epoch in pituitary surgery. This operator carried out an extensive exenteration of the frontal, ethmoidal and sphenoidal sinuses, together with partial removal of the sellar floor, after displacement of the nose downwards by Ollier's external incision.

The palato-sphenoidal route, which is the route followed in experimental operations on the lower animals, was proposed, as a method of operating on the human subject, by König in 1900, and first carried into effect by Ballance in 1909, but his patient unfortunately died from hæmorrhage without having regained consciousness. It is interesting to note that efforts, as the paper by Broeckhaert in the present issue shows, are now being made to revive this procedure which had fallen into disuse.

The gradual elimination of the unnecessary features in the extensive exenterations of the Schloffer type of operation need not here be traced out in detail, as they can be gathered by an examination of the illustrated tabular scheme on p. 363 *et seq.*, but great credit must be given to Von Eiselsberg for popularising a form of this upper rhinotomic operation which, besides being less mutilating, showed the natural advantages provided by the nasal septum as the guide to the seat of the disease, without opening the frontal and ethmoidal cells.

The next step must be associated with the name of Halstead, who adopted the lower rhinotomic displacement of Rouge as the initial step in the approach by way of the nasal septum. This method has been extensively and successfully practised by Cushing, who combines it when necessary with a bitemporal decompressive craniotomy. Cushing's brilliant monograph is dealt with elsewhere.

Last and by no means least the endo-nasal work of Hirsch of

Vienna, dating from 1909, demands special attention from us, since it is here for the first time that we find the rhinologist taking a hand in pituitary operations. It is obvious that an expert nasal operator is likely to start with some manipulative advantages over the general surgeon in the performance of Hirsch's operations by the endo-nasal route, involving as they do such highly technical work as submucous resection and sphenoidal sinus exenteration. For this reason the endo-nasal operation is not likely to find much favour in the eyes of the average general surgeon. Furthermore, although the neatest and least destructive of all pituitary operations, Hirsch's method is open to the objection that it selects the longest route of approach, and in its final stages it supplies us with but a cramped and restricted area of exposure.

On the other hand, seeing that the subjects of pituitary disease are usually far from ideal patients for operation, there are obvious advantages in selecting the endo-nasal method, by which the end in view can frequently be obtained with a minimum amount of shock, hæmorrhage and operative interference. Indeed, as Hirsch has demonstrated, the operation can be performed under local anæsthesia, and in separate stages, if need be. So that, even if a larger craniotomic interference should ultimately prove to be necessary, it may nevertheless be to the patient's benefit to entrust the primary operation through the nose to the practised hands of the rhinologist, who would thus divide with the general surgeon the responsibility for the operative treatment, just as the ophthalmologist, the physician and the radiographer co-operate for the purposes of diagnosis and medical therapy.

The treatment of tumours of the pituitary body is, of course, at present only in its infancy. What the future may have in store in the direction of improved methods of organo-therapy, of radio-therapy, and even of new surgical technique one cannot foresee. But it is worth while drawing attention to Cushing's confident expectation that operation on pituitary tumours by the nasal route will come to be as safe as the operation for the removal of the Gasserian ganglion now is in competent hands. Operative risks are diminishing, and results of a palliative nature are increasing. But when we come to consider the ultimate fate of those suffering from these and other brain tumours, our optimism is dashed by the reflection that at the present time the prognosis as regards the complete and permanent recovery of these patients is not in the least promising, even after the most skilful operative measures (see p. 362).

*Wm. Hill.*