a view can be obtained of the posterior end of the middle turbinate; and the posterior third or half of this body can be removed without interfering with the anterior portion. In this way the opening of the sinus may more readily be brought into view. Suppuration in the posterior ethmoidal cells will perhaps be discovered, and if found can be dealt with.

Operation on the frontal sinus for the improvement of drainage, on the lacrymal sac (intranasal dacryocystostomy), and inspection of and operation upon the antrum, may be carried out by this route. In the case of the antrum the middle portion only of the inferior turbinate need be removed; moreover, it will be found comparatively easy to remove the lowest part of the antromental wall with a chisel. A good view of the interior of the cavity will be obtained; polypi or a foreign body can be dealt with.

Structures seen from an unfamiliar point of view may at first be recognized with some difficulty, but a little practice will accustom the surgeon to the altered orientation. He should correct his impressions by occasional examinations through the nostril on the same side as the disease. When working in the posterior region of the nose this is most essential, as structures situated near the septum will be better seen when viewed from the same side. It is always well to remember that in these ethmoidal cases disease works great changes, and that anatomical landmarks present in health are often conspicuous by their absence. One advantage of working obliquely across the nose is that the point of the forceps or end of the ring knife is directed towards the orbit instead of towards the roof of the ethmoidal galleries and cribriform plate. My results in dealing with cases by this method have been very encouraging, and I hope at a later date to publish some of them.

DOSAGE IN THE THERAPEUTIC ADMINISTRATION OF THYROID GLAND SUBSTANCE.

BY

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In current medical literature reference is made by various writers to treatment by means of thyroid gland substance, termed "thyroid extract." This term, however, has no exact meaning, for it does not appear either in the *Pharmacopoeia* or in other works of like nature, and it is susceptible of different interpretations in different circumstances.

Thus it is probable that, if thyroid extract or ext. thyroidei sicc. be prescribed in powder, the thyroideum siccum (*B.P.*) will be dispensed, of which one part is equivalent to about five parts of the fresh gland; but that, if the same prescription be ordered in tablet, it will be supplied in the form of a preparation by one of the big drug houses, whose tablets are usually made up in strength approximately equivalent to the fresh gland, that is, about one-fifth the strength of the official preparation.

In this way the treatment of patients suffering from thyroid insufficiency is liable to be ineffective, as is well illustrated by a case which came under my care four years ago.

A woman, aged 38, consulted me on account of inability to discharge her duties as a nurse; she was suffering from well marked myxoedema. She complained of a variety of disturbances, especially at night, and the classic features of the disease were present. Her weight was 11 st. 7 lb. I ordered ext. thyroid. sicc. in tablets in doses increasing up to 18 grains daily, which she took for three months without any improvement. Upon inquiry I ascertained that the tablets supplied were those put up commercially, and that the patient had therefore been receiving the equivalent of only about 3½ grains of the official preparation daily. Treatment was then discontinued for a week or two, after which I altered the prescription to thyroideum siccum (*B.P.*), increasing up to gr. v—in cachet—of which three were taken daily. The result was immediate and immense improvement. The supraclavicular masses began to disappear, her weight decreased until she was only 9 st. 9 lb., the nocturnal distress ceased, and the facial and general aspect changed; but any omission in taking the thyroid has been followed by increase in weight and recurrence of symptoms. The daily dose of thyroid. sicc. (*B.P.*) taken by this patient is the equivalent of about 75 tablets of 5 grains each as commercially prepared.

Hence it is seen that there are two sources of possible error in the administration of thyroid gland substance:

1. Through the fact that in the official preparation the substance is presented in concentrated form, whilst in the products of some of the large commercial houses it is presented in approximately the strength of the fresh gland.

2. Through the use of the term "ext. thyroidei," which indicates neither of the above preparations specifically, but leaves to the chemist the decision as to which of them shall be supplied.

It may be argued that in the case quoted the chemist was at fault in dispensing the commercial tablets to my prescription; but, in view of the vagueness of the term "thyroid extract," this is not sound reasoning, and I have since ascertained from other chemists that they would have dispensed the prescription in like manner.

It is to be noted that in the *B.P.* 1914 the official dose of thyroideum siccum is given as ½ to 4 grains, instead of 3 to 10 grains, as in the *B.P.* 1898. In neither case is there any suggestion as to how frequently the dose may be repeated, and the change introduces another factor that may contribute towards ineffective treatment.

A CASE OF CONTRACTED PELVIS: CAESAREAN SECTION THRICE.

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NORWICH.

THE following case is of sufficient interest to be placed on record, I think. For economy of space I have omitted many interesting details, bearing on the questions of the effect of scarlet fever desquamation on the healing of operation wounds, the lochia after Caesarean section operations, and the comparative values of silk and catgut suture for the uterine wound.

First Operation.

The patient when first seen, October 27th, 1914, was a primipara aged 23. She had been in labour over thirty hours in the hands of a midwife, who had sent for a doctor; he, under an anaesthetic, had succeeded in drawing down a foot outside the vulva, and then requested me to see the case. I found, as well as the foot, the umbilical cord (not pulsating) protruding. The pelvis contracted, with a true conjugate of about 2½ inches; pulse and temperature were normal.

Considering that the uterus was most probably infected, and that embryotomy would be most difficult and dangerous, I considered abdominal hysterectomy would give her the best chance of recovery, and she was removed to the Norfolk and Norwich Hospital for that purpose. There it was decided by Mr. Everett, under whose care she came, to allow a chance for future pregnancies by performing conservative Caesarean section. This was done, and though the patient had, on the second day after this operation, a pulse of 140, and for a week elevation of temperature due to sepsis contracted in labour, she made a good recovery.

Second Operation.

On November 25th, 1915, she came to me, then eight months pregnant, and on December 16th she was admitted into the Norwich Maternity Institution under my care. The following pelvic measurements were noted:

Between the A.S.S., 10 in.
Between crests, 10½ in.
External conjugate, 6½ in.
Diagonal conjugate, 3½ in.
Transverse of outlet, 2½ in.

On December 19th I performed Caesarean section, delivering her of a living female child weighing 7½ lb. A few adhesions were found on the surface of the uterus, but no signs of a scar from the first operation. The patient progressed normally for the first three days, but on the evening of the fourth developed a definite attack of scarlet fever, which was followed by total desquamation a fortnight after. Notwithstanding this she made a good recovery, and was discharged with her child on January 12th, 1916.

Third Operation.

On June 8th, 1917, she was again admitted to the Norwich Maternity Institution pregnant, with labour due on or about June 16th. She requested me on this occasion to sterilize her.

On June 10th I performed Caesarean section, delivering her of a living female child of 6½ lb. Slight adhesions were seen, and a distinct scar was noted in the uterine wall. The Fallopian tubes were ligatured and divided, and the peritoneum stitched over each end with catgut.

The patient, who nursed her child from the third day, was discharged on the twentieth day after operation quite well.