CASE X.

Treated by Mr. Fletcher. Male, aged 41. Much pruritus every night when warm in bed. After painless action of bowels, a feeling of burning comes on, with dull aching pain across the back and down the thighs, which varies in degree, but never quite goes. Posterior ulcer discovered. Lactic acid applied. Pruritus disappeared and other symptoms gradually lessened as ulcer healed. Well in one month.

Examples of Cases where the Whole Circumference of the Lining Membrane was Dissected Off.

CASE XI.

Female, aged about 40, single; seen November, 1902. Pruritus ani for many years. Patient was in a thin, miserable, nervous condition, unable to sleep on account of the irritation. Inside the external sphincter the whole circumference of the bowel was practically denuded of epithelium. The affected ring of tissue was dissected off, and the upper edge sewn to the skin. Healing was slow in this instance, but the condition of pruritus ani gradually disappeared. This patient developed a fissure nearly two years after, which was operated on in November, 1904. No return of pruritus.

CASE XII.

Male, aged 40. Pruritus ani for twenty-five years. Much worse of late. No treatment has done any good. Suffers from insomnia caused by itching. Typical external appearance. Inside the sphincter the entire circumference of the bowel was denuded of epithelium. The internal "pruritic area" was dissected off, the patient being anaesthetized, and the upper edge sewn to the skin margin. The condition of pruritus gradually disappeared, and when the patient left the home three weeks later he was practically well of it.

Seen since and says he is a different man. Sleeps well and eats well. There was some slight contraction of the orifice, but this was easily got rid of by using a conical vulcanite bougie for a few times.

CASE XIII.

Male, aged 28. Pruritus ani for years. The whole circumference of the lining membrane was affected, this was dissected off and the upper edge sewn to the skin margin. Well in three weeks.

CASE XIV.

Female, aged 54. Pruritus ani for three years. Skin around anus excoriated, white and sodden. Ulcers found laterally and posteriorly. Membrane dissected off. Well in three weeks.

CASE XV.

Male, aged 54. Pruritus ani for years. Skin around anus white and sodden-looking. Ulcers found. Ring of membrane dissected off. Well in five weeks.

THE SURGICAL ANATOMY AND OPERATIVE TREATMENT OF TUBERCULOUS GLANDS OF NECK.

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The anatomy of the lymphatic glands of the neck has been very thoroughly described by Leaf in his *Surgical Anatomy of the Lymphatic Glands*, in Poirier and Cunéo's *Lymphatics*, translated by Leaf, and is also effectively treated in Cunningham's *Textbook of Anatomy*, p. 865, where a sufficiently full description of the normal glands is to be found. The practical surgeon has, however, to deal with structures that are no longer normal, and a thoroughly intimate knowledge of the anatomy of the neck as distorted by masses of enlarged glands is only to be acquired by a large operative experience. For while with small superficial glands the only practical point is to avoid scarring the skin in a wrong direction, a really extensive case involves the exposure of almost the entire contents of both the anatomical triangles, and structures as widely separated as the facial nerve and the thoracic duct may require special attention to avoid their injury or actual division.

ANATOMY.

For descriptive purposes the cervical glands may be divided into superficial and deep groups, including in the latter all glands beneath the layer of cervical fascia that forms the sheath of the sterno-mastoid. The superficial groups again may be divided into three sets—superficial parotid, superficial submaxillary, and superficial cervical.

1. *The superficial parotid*, two or three in number, are, when tuberculous, almost always found to be broken down, and are imbedded in the salivary gland. I have never seen the facial nerve damaged by their removal, so that the greater part of the pes anserinus must be protected by a sufficient layer of salivary gland tissue; but the proximity of the nerve is not

likely to be forgotten, and most operators will keep exceedingly close to the capsule of the gland, and, if it be adherent, scrape rather than dissect.

2. *The superficial submaxillary* are among the most common of enlarged glands. They lie outside the salivary gland superficial to the mylo-hyoid and upon the layer of deep fascia stretching across from the sterno-mastoid to the hyo-glossus, mylo-hyoid, digastric and hyoid bone. In their removal it is difficult for the inferior labial branch of the facial nerve to escape division, the facial vessels are deep to the glands, and can generally be avoided. When much enlarged, their adhesion to the fascia is so intimate as to make them practically continuous with the deep set, and they can then be easily removed in one group. The importance of this group and the frequency of their infection is readily understood when their connexions are considered. They receive lymphatic vessels from the superficial part of the nose, face, and both lips, while the floor of the mouth, front of the tongue, submaxillary and sublingual salivary glands are furnished with vessels that drain into the deeper submaxillary groups under the fascia, so that the intimate connexion of the two groups, when enlarged, is due as much to their simultaneous infection from neighbouring areas as to their direct anatomical continuity.

3. *The superficial cervical* set includes the glands that run along the external jugular vein superficial to the sterno-mastoid and along its posterior border, where they lie embedded in the cervical fascia, so that their free removal, in the rare event of the deep glands not being enlarged, exposes the muscular floor of the posterior triangle; the spinal accessory nerve, leaving the posterior border of the muscle a little below its centre, lies beneath the superficial group, and is seldom endangered by their removal, but the descending acromial and clavicular branches of the cervical plexus are usually found running directly over the glands and are not easily avoided.

The deep cervical glands have been divided for descriptive purposes into an upper and a lower set, but no such division is recognizable where most are affected by tuberculous disease. They extend in varying degrees of enlargement from the transverse process of the axis and base of the skull above to the junction of the internal jugular and subclavian veins below, where they pass outwards along the upper edge of the subclavian vein towards the axillary group, and inwards behind the clavicle and sterno-clavicular joints in close relation with the innominate vessels and the pleura.

The glands when enlarging tend, like the spread of a deep-seated abscess, to follow well-defined planes of least resistance, and are curiously directed and restrained by the firmer bands into which the cervical fascia is divided. For instance, it is very rare to find enlargement of the group in the anterior triangle to extend lower down along the anterior edge of the sterno-mastoid than the lower border of the thyroid cartilage; below that level they are directed backwards under the muscle over the carotid sheath and bulge out under the posterior border of the muscle, coming thus in contact with the glandular concatenatae proper that lie directly upon the fascia forming the sheath of the internal jugular vein. This backward direction of the enlarging glands is brought about, no doubt, by the strong pressure exerted on them by the thicker sternal head of the muscle and its intimate fascial connexions, as, where, owing to division of its nerve, the muscle has undergone atrophy, I have several times removed enlarged glands from beneath its anterior border nearly as far down as the clavicle.

In the same way, I have never found any enlarged glands in the closely-confined space above and internal to the posterior belly of the digastric, while outside and above the posterior edge of the digastric and stylo-hyoid their enlargement in cases of any extent is a fairly constant feature.

In notes of my own cases I am accustomed to refer to the deep glands as belonging to three main groups—an anterior group comprising all glands that can be reached from the front of the sterno-mastoid, and an upper and lower posterior group, these being separated by the spinal accessory nerve passing across the posterior triangle.

The lower posterior group comprises three fairly definite sets: (1) Those glands that were originally superficial or internal to the vessels and have in their growth been directed outwards and backwards in the direction of least resistance; (2) those that belong naturally to the posterior triangle; and (3) those that are in actual contact with the venous compartment of the carotid sheath. In removing these the vein should be deliberately exposed and kept in sight, and is

then out of danger; but the normal anatomy of the parts is considerably altered, the glands displacing the thin-walled vein inwards over the artery, thus leaving the pneumogastric nerve in its compartment more or less directly under the outer edge of the vein, as shown in the diagram, and this position must be remembered if it be necessary to pass a ligature round the vein.

In old cases where several operations have been performed, especially if one or more attempts to "thoroughly clear out" the neck have been made, there is always the possibility that the vein itself has been ligatured, then irregularly distributed venous channels are apt to arise and embarrass the operator, and he has to keep close to the capsules of the glands until

Fig. 1.—Diagram showing moderate-sized glands at level of sixth cervical vertebra.

the vagus nerve has been identified and avoided. Kocher, in his *Operative Surgery*, 4th edition, page 126, says that "unilateral division of the nerve does not endanger life, and indeed may not give rise to any unfavourable symptom whatever." Whichever side be divided or injured one "unfavourable symptom" may be looked for with abiding certainty—paralysis of the muscles supplied by the recurrent laryngeal nerve with its typical whispering voice, and there is always the possibility of a direct stimulation of the inhibitory fibres producing an immediate fatality.

Fig. 2.—Diagram showing glands enlarged and displacement inwards of internal jugular vein over vagus nerve.

Sir F. Treves in his *Manual of Operative Surgery* (vol. 2, page 171) says "it is very rare indeed for this nerve to enter the field of the operation during excision of tuberculous glands," but in old cases if the deep glands are thoroughly dealt with it comes into direct view in nearly every case, and its altered position should be borne in mind. The spinal accessory nerve is endangered with all three of the deep groups: (1) In the anterior triangle before it enters the muscle, and (2) in the posterior triangle in clearing the group above

and that below the nerve. Division of this nerve is followed by paralysis and rapid wasting of the muscles it supplies, so that its early identification and isolation are alike advisable. The members of the anterior group are apt to dip in between the nerve and the internal jugular vein in the inch or so of its course from beneath the posterior belly of the digastric to its point of entrance to the sterno-mastoid. In old cases the gland capsules are firmly adherent to it, but the nerve can generally be defined if a sufficient exposure be made by firm retraction of the muscle. In the posterior triangle the nerve crosses the space in a species of groove between the glands, running perhaps its greatest risk of being cut where it emerges from the sterno-mastoid "at or slightly above the middle of the posterior border of this muscle"; it sinks beneath the upper border of the trapezius on a level with the sixth or seventh cervical spine (Quain's *Anatomy*: Appendix). To avoid injury to this nerve is one of the first points in the operation; were it not for the necessity for preserving it the simplest method of removing glands would obviously be to begin at the lowest and dissect out all the glands of the neck in one mass; as it is, the safest manner is to divide the mass into the three groups already mentioned; the removal of the anterior group should leave the upper end of the nerve clear in the upper part of the anterior triangle, and the position of the nerve being remembered in the posterior triangle the glands should be cleared in two groups above and below it.

The upper anterior group if much enlarged under the upper end of the sterno-mastoid comes almost into contact with the main trunk of the facial nerve as it emerges from the stylo-mastoid foramen and moves forward superficial to and in front of the posterior belly of the digastric to enter the parotid gland; the nerve is here in close relation with one of the temporo-facial veins as they emerge from the parotid gland; these veins from their dense adhesion to the capsules of a broken-down gland are sometimes injured, and it is extremely easy to put a pair of artery forceps on the facial nerve as well as the punctured vein near it. This must have occurred in two of my own cases where complete facial paralysis, fortunately only of a temporary character, followed operations with considerable venous haemorrhage in this region. The length of time taken for recovery was the same in each case, beginning at the eighth week in the fronto-orbital region and being complete in ten weeks from the injury. The vicinity of the nerve is sometimes betrayed by vigorous twitching of the facial muscles, but it is very rarely actually exposed, it having so short a course outside the parotid gland tissue.

The lower groups of glands, dipping as they do under the lower end of the sterno-mastoid and clavicle, are in relation with the internal jugular, subclavian, innominate, and vertebral veins; superficial to them are the suprascapular, transverse cervical and external jugular veins, while deep to them are the anterior scalene muscle and phrenic nerve, the top of the pleura, and the subclavian artery. The only structures that give real trouble are the internal jugular and innominate veins, and fortunately, the glands are adherent to the sheath of the vessels, not to their actual walls, so that division of the fascia over the glands close to the vein liberates the latter and allows of its being pushed forwards out of the way. The cervical fascia forming the carotid sheath becomes apparently continuous at the lower part of the neck with the layer over the prevertebral muscles, and as the deeper glands are normally embedded in that fascia and in contact with the vascular compartment of the carotid sheath, such glands when they enlarge practically monopolize the whole outer wall of the sheath, which spreads out over them and fuses with their own proper capsular covering; when the glands are freed from their connexions this fascial covering comes away with them, leaving the thin-walled vein quite bare, but visible and uninjured.

This adhesion of the glands to the fascia is constant throughout the whole length of the vein, but the ease with which the glandular mass can be isolated from it is much more marked at its lower end than in the upper and middle parts of its course; this is no doubt due to the glands being there more exposed to friction from muscular contractions and a consequent greater development of adventitious fibrous tissue in its neighbourhood, but unless the parts have been disturbed by previous partial operations it is rare indeed that an effectual and safe isolation of the vein cannot be effected.

Out of my last 250 cases it was necessary to tie the vein four times; one of them had already been subjected to four previous operations, and the other three instances had all been the seat of former attempts at complete extirpation, and

the operations were carried out through the old scars. Injury to the pleura or the fascia over it is recognized during operation by a peculiar whistling sound made by the entering air; it produced no apparent ill effects in two cases in which I have personally observed it. In one of the cases a minute pin-hole opening was distinctly seen on retracting the vessels, from beneath which a mass of caseating glands had been removed. Probably the puncture is sealed automatically when the wound is closed and the dressing applied.

Injury to the thoracic duct has not occurred in my own experience, though I have twice recognized it exposed in the wound. Deane's, in a very interesting account of a case of this injury, implanted the duct into the wall of the vein, but he quotes several authorities, Kocher among others, to show that it can be ligatured without injury. In the cases where I saw the duct exposed, the glands were readily separable from the veins after their overlying fascial envelope had been divided. Further cases of injury to the duct are recorded by Schroeder and Plummer, of Chicago, in the *Annals of Surgery*, 1898.

OPERATIVE TREATMENT.

In dealing with gland cases three cardinal points are to be remembered: (1) The operation should be as complete as possible; (2) the spinal accessory and important nerves and vessels should escape injury; (3) the incisions should be planned so as to make the resulting scar as little visible as possible.

A definite routine description of an operation for all cases is obviously absurd, as they vary from a superficial gland abscess to a large mass involving an exacting dissection for its safe removal. The cases fall, however, into two main groups: those where there is suppuration that has burst the capsule and infected the skin or subcutaneous tissues, and those where the caseating matter is still enclosed in the gland capsules, these latter forming by far the greater number of cases.

The gland abscesses of children where the skin is damaged are best treated by enclosing the infected area in an elliptical incision and removing as much as possible of the affected gland with it; if other glands beneath it are enlarged—and this is nearly always the case—they can be removed at the same time through the same incision. Before proceeding to remove the deeper glands the superficial wound is rubbed over with a 1 in 500 solution of biniodide of mercury, and after the deep glands are removed the edges of the original wound are freed and closed by interrupted sutures in the usual manner. Stiles of Edinburgh, in a paper published in the *BRITISH MEDICAL JOURNAL*, September 12th, 1896, advocates, after incision and scraping, the mopping out of the abscess cavity with pure carbolic acid and stuffing with iodoformed worsted; others have advocated in place of the carbolic acid a 1 in 100 solution of bichloride of mercury. Wounds treated in this way often heal readily enough, but are liable to be followed by subcutaneous thickening that breaks down a few weeks after the operation, while the enlarged glands that exist usually beneath the superficial abscess cavity are liable to be overlooked altogether if this method is too implicitly followed, so that the better practice is, where possible, to find the outer edge of the broken-down gland and remove it bodily, together with the glands so constantly found adherent to the fascia on its under-surface. With this possible exception, the older partial methods of incising the capsule of the gland and scraping out its contents with a sharp spoon have practically ceased to be recommended, and, with all modern writers, Stiles advocates that in adolescents and adults excision should be the rule where the disease is localized to the neck. With broken-down skin, the surgeon is, of course, restricted in his choice of a suitable site for the incision, but in other cases the position of his cuts and the resulting scar becomes a very important one.

Though it has now long been agreed that incisions made along natural lines of cleavage, such as are visible in most necks, produce less marked scars than those produced by the older longitudinal incisions on either side of the sterno-mastoid, we constantly see cases that have been operated on in the metropolitan hospitals with such scars; the anterior of these incisions is to my mind particularly vicious—not only is its resulting scar most unsightly and conspicuous, but it is more frequently the seat of keloid thickening than almost any situation in the body and gives by no means so free an exposure as the obliquely transverse cut following the natural creases of the skin; even the posterior vertical cut is unnecessary except where the lower part of the posterior triangle is involved, and then it is better made more obliquely.

When previous operations have taken place the new incision should always, where possible, utilize the old scar; but as I have seen many necks with what amounted to rows of parallel scars and their accompanying stitch marks, in nearly all of which the excisions could have been carried out through the original line, this is not the universal rule.

Fig. 3.—Through the curved line *a*, which is in a natural crease of the neck, the entire anterior triangle and most of the posterior is cleared easily.

The attached diagram shows the incisions I am in the habit of making; the obliquely transverse cut is sufficient for the vast majority of cases, as its edges can be freed from the sub-jacent structures and retracted down considerably. Fig. 4 shows the incisions I now adopt for the largest type of case. For those cases where the posterior triangle is almost alone affected the oblique posterior cut from the mastoid to the sternum, or so much of it as is necessary, is employed. Formerly, in large cases I was in the habit of making a straight cut nearly down to the clavicle, from the posterior

Fig. 4.—Incisions for extensive cases, the line *b*, lying behind the fold of the sterno-mastoid, is almost invisible from the front.

end of the transverse incision (*a*), and turning this triangular flap forwards. I found that the apex of the flap did not heal well, and that the straight cut to the clavicle caused considerable disfigurement. I now make the two incisions shown in Fig. 4, so as to leave a fingerbreadth or more of skin undivided at the apex of the triangle; the posterior incision, instead of going straight down towards the clavicle, is made obliquely forwards so as to terminate at the sternal

head of the muscle. This incision lies in a natural fold of the neck, as the sternal head of the muscle invariably stands out prominently, while the whole incision, lying as it does behind the wide fold made by the muscle, leaves a scar that is practically invisible from the front. An additional advantage for this direction of the incision is that through it the whole of the posterior triangle can be laid bare with very little separation of tissue, and the posterior border of the muscle can be freed in its entire extent, while in conjunction with the upper oblique incision a complete and thorough exposure of the entire contents of both triangles is readily obtained.

The obliquely transverse incision leaves a mark nearly as invisible as the one referred to as used by Döllinger of Buda Pesth (*Annals of Surgery*, 1903), and fully described by Parry of Glasgow in a paper read at Brighton in June, 1903, and published in the *Reports of the Society for Study of Disease in Children*, vol. iii, 1903. The incision is there made "through the hairy scalp—from near the apex of the mastoid to the nape of the neck." "By following the outline of the hairy scalp the wound has its convexity downwards, and the centre of it is thus brought nearer to the affected glands."

If the incision (a) be kept in a crease of the neck its posterior part is covered by hair, while by prolonging the incision forwards in front of the edge of the sterno-mastoid the anterior triangle can be cleared out much more effectually than by working from beneath the muscle, as in Parry's description. His method appears to be less suited to adherent cases involving the anterior triangle than to freely-movable masses that can be readily shelled out, and even then as the glands are not removed *en masse*, and separation of fasciae is recommended by the author to be carried out "with two forefingers introduced into the wound beneath the sterno-mastoid muscle," it is more than probable that in less expert hands than his own a very considerable number of diseased glands would escape surgical consideration.

A very brief description of the details of the operation is necessary, once it is admitted that the glands are to be removed and that they are best removed *en masse* rather than separately, or by multiple incisions after the manner described in a paper of historical interest by Mr. Teale, of Leeds, in Professor Clifford Allbutt's *System of Medicine*. Personally, like most men working largely in one field of surgery, I have fallen into a routine manner of dealing even with these at first sight irregular masses. To take first a medium-sized enlargement, involving the anterior and part of the posterior triangle, the preliminary incision (a) exposes the superficial glands, which are cleared out of the way, and if they are adherent to the deeper ones they form a suitable handle to pull them into view. The anterior group—those I have alluded to as being in front of the spinal accessory—are always dealt with first; the fascia in front of the sterno-mastoid is freely incised, and the lowermost of the glands is slightly freed on its surface and seized with toothed forceps. The kind I employ is a modification of Mr. Arbuthnot Lane's tissue forceps, made for me by Down Brothers. The fenestrated blades are wider than in the original pattern, and the teeth, which are made slightly larger, are doubled in number. A variable amount of dissection frees the gland from its deep attachment, and the entire group with their fascial envelopes intact is systematically cleared upwards; working from the under surface of the lowermost, the raising of this gland exposes the carotid sheath on which it rests, and the thin-walled vein should always escape injury, as it comes at once into full view of the operator.

The spinal accessory nerve comes into view long before it is in actual danger, and is best avoided by dealing with the glands behind and above it separately. Early ligation of the internal jugular vein, and its removal with the glands, is a gratuitous complication of the operation. Provided that the surgeon avoids tearing with blunt instruments, and confines himself to clean dissection with the point of a sharp knife, he should be able to divide the fine bands of fascia connecting the carotid sheath with the gland capsules without injuring either the vein or its larger tributaries; in the rare cases where it is accidentally injured, unless the puncture is quite small and easily controlled by pinching up and tying part of its wall, it is safer to at once put an aneurysm needle round the vein and tie above and below the seat of injury, rather than to make a dash at the bleeding point with a pair of artery forceps, as these may easily tear the opening wider, and are capable of nipping the vagus with undesirable consequences.

When the anterior triangle is cleared up, and the spinal accessory nerve sufficiently freed to be safe, the upper pos-

terior group can be dealt with from behind the muscle whose posterior edge is raised from the glands beneath with a few touches of the scalpel. The hindmost and lowest gland that can be reached is freed and seized with tissue forceps, and beginning beneath it, the glandular mass, with the fascia covering the muscles in the posterior triangle, is dissected up and gradually worked out from beneath the sterno-mastoid, where its connexions with the outer wall of the vein are readily separated. The position of the vein being already made clear in the anterior triangle it is very easily identified, and, except in old cases with dense adhesions, is separated from the glands with very great ease. In the larger cases where two incisions are employed and where both triangles are completely cleared, the same methods are adopted. First, the anterior triangle is cleared through the incision as figured in diagram (a). The posterior incision is then made in line shown in diagram (b), and is carried down as far as the necessities of the case demand. The sterno-mastoid is raised from the surface of the glands, and the mass is dealt with in the simplest and safest way. First, the lowest and most posterior gland above the course of the spinal accessory across the triangle is sought for, freed slightly, and seized with the tissue forceps; this is usually just under the upper border of the trapezius. The dissection is then carried straight down to the muscular floor of the triangle, and the whole mass is gradually dissected forwards till the neighbourhood of the vein is reached. The separation and division of the deep fascial connexions, which are often exceedingly tough, gives a very desirable mobility to the mass to be removed. At this stage the freed posterior border of the sterno-mastoid is pulled forwards by an assistant, the partially freed mass, firmly held by the tissue forceps, is kept on the stretch and a few light touches on its upper surface under the muscle from above downwards usually suffice to bring the vein well into view. When the attachments of the sheath of the vein to the glands are divided it is readily pushed out of the way under the muscle, and the mass is easily separated from any remaining attachments. The group below the spinal accessory now remains to be dealt with, and as the vein is already well in view and the line of separation of the sheath and gland capsules is, as it were, "under the hand" of the surgeon, the safest plan is to continue separating the glands as far down as the subclavian; once the vein is freed the most external gland is seized as before and the lower mass is gradually liberated by dissecting it up from its under surface. The lower one descends into the subclavian triangle, the greater is the need to keep the point of the knife accurately on the capsule of the gland; if that be done the vicinity of the formidable structures to be found there need in no way interfere with a complete clearance of the diseased tissues.

I have now, excluding minor cases, operated on over 250 of these necks, and have yet to find a case where it is necessary to even partially divide the sterno-mastoid muscle. I have not found it necessary to adopt the methods of Professor Fenyer, of Chicago, U.S.A., a description of whose operation is to be found in the *Annals of Surgery* for 1898. His incision is practically the same as the posterior one that I employ, but he then "divides the clavicular origin of the sterno-mastoid and places a provisional ligature round the vein to prevent the entry of air in case of injury." I have no personal experience of what a temporary ligature round the lower end of the internal jugular would cause in the shape of distension of the vein above, but it may fairly be assumed that the safe separation of the glands from it is not likely to be facilitated by this remarkable manœuvre.

Before closing these large wounds hæmorrhage must be very completely arrested: in the posterior triangle especially a great number of small vessels require ligation, but beyond the occasional division of the communicating facial vein very few vessels are injured in the anterior division.

Like most surgeons dealing with tuberculous tissues, I have had repeated troubles with silk ligatures, which exhibit a reprehensible tendency to reappear a few weeks after operation. I have, therefore, taken to using sterilized chromic gut of the ten-day variety recommended by Professor Sir W. Macewen. So far I have had no trouble with it, but past experience has made me chary of recording a final favourable verdict. Like all wounds, these heal more ideally if aseptis be employed and no lotions are allowed in the wound; but, as most of the hospital cases are the site of scars, sinuses, or breaking-down glands, it is rare that the washing-out of the wound with a 1 in 4,000 biniodide of mercury solution is able to be dispensed with.

In a case of any size a gauze drain for twenty-four hours is always used, and in all cases I am more inclined to use it than a few years back, when the prevailing fashion was to sew up every wound firmly. For sutures I prefer interrupted stitches of the finest gossamer silk-worm gut, which are removed on the fourth day. So long as there has been no tension in the wound, healing is usually effected without a row of stitch marks, provided that a very fine needle is used. In all extensive cases I make a rule of keeping the patient in bed at least fourteen days from the operation, and where circumstances permit it is advantageous to keep them lying down, to a great extent in the open air, for a full month, and by that time the wound is soundly healed throughout.

As to the disappearance of enlarged tuberculous glands without operative treatment, it must be admitted that such cases are extremely rare after the glands have existed as definite palpable swellings for more than six months. When such a happy result is achieved its main contributory causes are always the climatic and hygienic conditions, and to these must be added the time that can be given up to prolonged rest or at least a cessation of business worries or harassing pursuits. It cannot be too strongly impressed on parents and patients that a few weeks at the seaside, especially if spent at a crowded boarding house, is absolutely futile in these cases; the object to be attained is to endow the tissues of the body with sufficient force not only to enable its cells to destroy the invading organisms but to develop sufficient resistance to a possible second invasion when the conditions of environment are less favourable. For this months or even years are necessary, and in the case of young children they should be left at a seaside place for two years at least; if this cannot be done, and at the end of the time that has been allowed a sensible diminution in the size of the glands has not taken place, their removal by operation should be carried out without hesitation. Young adults have been benefited by varying the seaside atmosphere with a stay for some months in a Swiss mountain resort, but very great care is necessary in selecting the cases likely to be improved. The train journey is fatiguing, the food is different to that he has been accustomed to, and if proper supervision is not provided the patient is apt to indulge too freely in the vigorous athletic pursuits that are common in such centres, and, as a result of overstrain, some of the glands break down, and the return journey is undertaken under distressing conditions. A long sea voyage is sometimes recommended, but is always a risky experiment, and the rapid changes of climate from our own wintry weather to the humid moisture of the tropics is often unsettling to an invalid.

In the following four sets of cases operation should be carried out at once:

(1) Where suppuration is taking place; (2) where sinuses, as a result of burst abscesses or previous incomplete operations, are present; (3) where, though not obviously suppurating, the glands are increasing in size, are causing pain, uneasiness, and deformity, and have not yielded to climatic and hygienic measures; (4) where gland infection has occurred in subjects unable or unwilling to incur a prolonged period of rest, or whose future would be jeopardized by the interruption of their education, or by the presence of the glands, as in boys wishing to enter the public services.

In giving the reasons for an operation to the patient, or his parents or friends, too much stress is still laid on the possibility of an early infection of the lungs with tubercle as a direct result of the glandular trouble. I have certainly seen the glands infected in a case of acute pulmonary tuberculosis, no doubt through the blood stream, and can cite two or three large unoperated gland cases that have eventually developed pulmonary tubercle, but in my own experience general tuberculous infection from primary glandular enlargements is exceedingly rare. The possibilities of discharging sinuses, scarring and contracting of the skin, chronic invalidism, and general damage to the organism, are sufficiently cogent reasons to urge, when requisite, the performance of an operation that is attended by few dangers, accompanied by small disfigurement, and, where completely carried out, followed by no recurrences.

REFERENCE.

¹ *Lancet*, vol. ii, 1903.

CONGENITAL HYPERTROPHY AND DILATATION OF THE SIGMOID FLEXURE.*

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SO-CALLED idiopathic dilatation and hypertrophy of colon (or Hirschsprung's disease, as it is called by the Germans) is of such rare occurrence—or probably, to be more correct, though not infrequent, is so seldom recognized during life—that it may not be out of place in giving an account of the case I am bringing before you briefly to refer to the symptoms and pathology of the disease.

It occurs most frequently in early childhood; in the majority of the reported cases the symptoms having commenced within a few days of birth. These are—constipation with abdominal distension, sometimes reaching enormous proportions, and more or less frequently recurring attacks of intestinal obstruction, the general health being often seriously affected by intestinal auto-intoxication. In well-marked cases which have attained a few years of life there is, in addition to a permanently-enlarged and lengthened abdomen, marked deformity of the thorax, which is shortened and widened so that the lower ribs lie horizontally and the sub-costal angle is widely opened out. The deformity is well illustrated in a paper by Walker and Griffiths,¹ describing a case in a boy aged 11, in whom the measurements from the base of the ensiform to the suprasternal notch and pubes were respectively 4½ and 23 in.; and in another by Crozier Griffiths² on congenital idiopathic dilatation of the colon.

The disease is more frequently found in males than in females, the proportions varying in different collections of cases by different writers—for example, Hale White³ refers to 12 cases, of which 11 were males; Crozier Griffiths⁴ collected 24 cases, of which 20 were males; and Duval, quoted by Kredel,⁵ collected 45 cases, of which 36 were males. Death generally takes place in early life from various causes—for example, obstruction, colitis, syncope or perforation, and probably volvulus—but a certain number reach adult life. Necropsy or laparotomy shows that the distension is entirely due to enormous dilatation with elongation of the colon or some part of it, especially the sigmoid. The muscular coats—sometimes all the coats—are greatly hypertrophied. The rectum, though sometimes taking part in the dilatation, is generally normal, and no organic obstruction is found to account for the condition. When occurring in middle or advanced life the symptoms and pathology are the same, and although a history pointing to congenital origin is more often wanting than not, the enormous hypertrophy and dilatation of the bowel, the usual absence of faecal accumulation, and the fact that the patient is generally a man, suffice, as a rule, to differentiate the condition from dilatation due to habitual overloading of the sigmoid with faeces.

The case I now report is particularly interesting, first, because it is one of those few in which there is an undoubted congenital history, and at the same time the subject has reached adult life, is well developed, and now enjoys complete health; and, secondly, on account of the coexistence of the faecal concretion which led to the error in diagnosis.

The patient, a plump and well-developed, though stupid, young woman of 21, was admitted to the Swansea Hospital on July 21st, 1904, for abdominal tumour. The following history is copied from the house-surgeon's notes:

In February, 1903, she first noticed a hard lump in the lower part of the abdomen to the left side. It caused no trouble, but five weeks ago she noticed that it had increased in size. The only abdominal pain she has had has been consequent upon aperients or enemas for constipation, from which she has always suffered. Apart from this she has always enjoyed good health until five or six weeks ago, since which she has felt below par. Menstruation regular.

There was a hard globular and movable tumour, dull on percussion, rising out of the pelvis somewhat to the left of the middle line. On vaginal examination it was most obvious in the left posterior quarter of the pelvis, and was movable apart from the uterus, which it had pushed forward and to the right. The diagnosis was solid ovarian tumour of the left side.

On August 3rd the abdomen was opened and there presented in the wound a thick-walled collapsed viscus which was at first mistaken for an enormously dilated stomach. It extended from immediately behind the pubes upwards into the upper umbilical and well into the right iliac and lumbar regions,

* Read before a meeting of the South Wales and Monmouthshire Branch of the British Medical Association at Newport, March 9th.

REQUESTS TO MEDICAL CHARITIES.—The late Mr. Blackall Simonds of Bradfield, Berks, left £100 each to the Royal Berkshire Hospital and the Reading Branch of the Queen Victoria Society for Nursing Poor People at Home.