Usually it does not give rise to any definite phenomena. Wilson Fox¹ says: "The symptoms of this condition are few and doubtful until subcutaneous emphysema is produced. Sudden and rapid increase of dyspnoea, with augmented clearness of the percussion note, have been observed in some cases; but the auscultatory signs are not significant." Walsh quotes a case of phthisis in which, after profuse hæmorrhage, a percussion resonance like that of pneumothorax occurred at both sides of the back of the chest, the cause of which was made clear in a few hours by the appearance of subcutaneous emphysema.

The occurrence of pneumothorax from rupture of the pleura in interlobular emphysema (as in Case 1) is said by Hertz to be more common than the forcing of the air through the root of the lung and the mediastinum into the subcutaneous connective tissue. The production of subcutaneous emphysema is an accident almost limited to early childhood. Of 25 cases collected by Roger, 20 occurred in children; and of these instances of "general emphysema in children," as Roger calls them, 6 occurred under the age of 2 years, 10 between 3 and 4, and only 4 between 10 and 15. My own patient was 11 years old.

It is not easy to account for the interlobular emphysema in the second case which I have described. The causes of this condition may be grouped under two heads:

1. Violent strain upon healthy lungs, as in the case of croup.

2. Normal or abnormal strain upon diseased lung tissue, as in the instances of abscess, acute tuberculosis, and pulmonary hæmorrhage before mentioned.

In this boy there was no evidence of the existence of lung disease. It is true that he had had pleurisy two years before, but this had apparently left behind nothing but a thickened pleura (which, by the way, possibly prevented the occurrence of pneumothorax). The boy is said to have cried with headache; this is the only history of any unusual strain. If the crying had been that of passion, it might be accepted as a sufficient explanation; but headache tends to inhibit all unnecessary exertion, and it is difficult to believe that a boy with a headache would cry with energy enough to bring any undue pressure to bear upon his lungs. The rupture of pulmonary tissue was therefore due, presumably, to the presence of some weak point—not actually diseased—in its structure, which gave way under no unusual pressure.

The case illustrates an important fact with regard to interlobular emphysema which is perhaps not always sufficiently recognised—that it may exceptionally produce the gravest symptoms. The patient was almost suddenly seized with dyspnoea, which rapidly became so intense as to lead a medical man to conclude that there was an obstruction in the windpipe necessitating immediate tracheotomy; and on admission to the hospital an hour or two after the onset of the symptoms the boy appeared moribund from asphyxia. In its extreme form interlobular emphysema has caused sudden death. Ollivier records the case of a man who fell down dead in a quarrel, from the asphyxia entailed by extensive interlobular emphysema. Leroy d'Etiolles demonstrated on animals that forcible lung inflation might, by the production of interlobular emphysema, cause death as suddenly as the division of the medulla oblongata; and Martini enumerates it amongst the modes of perpetrating infanticide.

It is obvious that no direct treatment can be adopted in interlobular emphysema; all that can be done is to relieve symptoms, and in grave cases to endeavour to prolong life until the effused air is absorbed. Where the secondary subcutaneous emphysema is extensive, some authorities recommend puncture of the skin.

DEATH OF A FOOTBALL PLAYER.—An inquiry was held at St. Helens on May 7th touching the death of William Ellaby, who died from injuries received in a football match. The evidence showed that deceased was "dribbling" the ball down the field, when a player on the opposite side, named Gaskell, in tackling kicked him on the ankle. Ellaby played to the close of the game, but the ankle began swelling, and he was removed to the hospital, where he died. The jury returned a verdict of "Accidental Death," it being proved that the deceased stated before his death that the affair was a pure accident.

¹ *Diseases of the Lungs and Pleura*, 1891.

CYSTS OF THE TONSILS, NOSE, LARYNX, AND EAR.¹

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It is no part of my object to bring before the reader an exhaustive account of the occurrence of cysts in these parts. Indeed, with but slight digression, I shall confine myself mainly to a short statement of facts which have come under my own observation.

A careful perusal of English, American, and Continental works on throat diseases will reveal the fact that cysts of the tonsils are rarely if ever mentioned. It is, however, quite common to meet with small whitish-yellow areas, both on the glands themselves and in their immediate neighbourhood. I do not refer now to the cheesy accumulations which are often found partially extruded from a mucous follicle or crypt, and which are easily pressed out as cheesy ill-smelling plugs. In the class of cases to which allusion is intended, the deposit is covered by a layer of mucous membrane, and the appearance presented is, owing to this fact, somewhat similar to a pointing pustule. Careful inspection reveals, also, that the yellowish area bears upon its surface a fine vascular network. After puncturing and exercising a small amount of pressure on the adjacent parts, a somewhat cheesy nodule of white colour becomes extruded, differing only in the absence of fœtor from the cheesy masses above referred to. The condition just described is practically a cyst due to retention of exuded matter and desquamated epithelium, either within a gland or a crypt. I have, however, met with very definite *retention cysts in the tonsils* on two occasions. In both cases the patients were females. In neither was pain complained of, but only discomfort. On the affected tonsil was seen a yellowish-white area of considerable size over which small vessels ramified. Incision gave exit in each case to about a drachm of cream-like fluid, resembling pus, and without any odour or even bad taste. In my first case I immediately excised a considerable portion of the outer wall, while in my second I contented myself with evacuating the retained secretion, and telling the patient to return if any renewal of discomfort ensued. In the former I know that a perfect cure resulted, while, as the latter has not returned with any complaint, I presume that a similar result followed simple incision in her case.

These cases have appeared to me of sufficient interest to record, because both from my own experience and from my reading I believe them to be extremely rare. The etiology of such cysts can be very simply explained. Although in the human subject it is doubtful whether glands usually discharge into the crypts, yet we must remember that within them there is constantly occurring a destruction of the epithelium and an exudation of leucocytes presumably associated with more or less fluid. If, then, owing to previous changes of an inflammatory nature, a crypt has been changed into a closed cavity, we may expect it to become filled with creamy contents, such as were present in the two cases just described.

In the naso-pharynx cystic formations may occur in exactly the same manner. Tornwaldt ascribed them to retention of fluid in what he described as the bursa pharyngea. It is now, however, believed that this cavity, when present, is merely a result of inflammatory changes in one of the furrows of the pharyngeal tonsil.

Cysts of the nose are by no means very common. Hydatid cysts and the dermoid variety have both been described, and, through the kindness of Mr. Caird, I was enabled to see a case in which one of the latter had been spontaneously extruded from the nose. The nasal chambers, afterwards examined, gave no evidence of either the seat of attachment or mode of origin.

Johnson, Lefferts, and Horsley have described cystic growths arising from the turbinated bodies. I do not know whether these were merely instances of degeneration of mucous polypi or primary cysts. In Horsley's case the

¹ Read before the Edinburgh Medico-Chirurgical Society.

growth was thought to be attached to the inferior turbinated body, so that in all probability its etiology could not be explained on this hypothesis. Spencer Watson has met with a case in which a large polypus was entirely converted into a multilocular cyst. I have also seen a large mucous growth having all the external appearances of a polypus, but which consisted merely of a cyst wall with fluid contents. Voltolini seems to have regarded this cystic degeneration of nasal polypi as not of any very great rarity, but in this respect his experience has probably been unique.

A form of cyst which I have met with on two occasions has the following characteristics. On inspecting the nares anteriorly a swelling is seen projecting below the inferior turbinated body, and on pressing upon this with the probe fluctuation is detected. In both of my cases the finger applied just outside of the corresponding ala, where a slight fulness was visible, could detect fluctuation, and inspection of the nasal projection during the process showed movement of the bulged mucosa. Fluctuation could also be elicited by inserting one finger under the upper lip while pressing with the other over the full area at the side of the nose. It will thus be evident that in each of the two cases (for they were exactly like each other) examination revealed a fluid-containing cavity bounded below by the labio-lingual fold, laterally by the cheek just outside of the nasal cartilage, and internally by the mucous membrane lining the outer wall of the inferior meatus at its anterior part. On an exploratory puncture these cysts yielded a considerable quantity of a straw-coloured and apparently serous fluid. Unfortunately the amount was not measured, nor was the liquid examined either chemically or microscopically. As both these patients were seen in an out-patient department I have no exact notes of the symptoms which actually directed attention to the nose. In one of them, however, there was considerable pain in this part, which was eventually relieved by the removal of the cyst. The treatment adopted varied in the two cases. In one a cure was probably attained by puncturing from the inferior meatus of the nose, which was twice repeated as the cyst refilled after the first escape of fluid. I say probably, because after the second repetition of this little operation the woman did not return to hospital, and was therefore, I presume, relieved. The second case, however, proved much more obstinate. Opening with the electric cautery, with subsequent introduction of the incandescant point into the cavity, succeeded in exciting suppuration, after which I introduced a drainage tube, but the latter had to be abandoned owing to the impossibility of keeping it in position. Eventually I requested my colleague, Mr. Duncan, to dissect out the cyst wall by reflecting the upper lip, which was done and resulted in a cure.

The etiology of the cysts I have just described is not by any means clear. I regret extremely that owing to the casual way in which the cases were first met with, that is, among a crowd of others in an out-patient department, it was impossible to make accurate observations upon the microscopic and chemical character of the fluid contents of the cysts. So far as could be made out, any connection with the superior maxilla or teeth could be definitely excluded, so that in considering the etiology of these cysts we are thrown back upon an hypothesis which makes a gland responsible for their production. Whether retention occurred in one of the labial or in one of the numerous nasal glandules I do not profess to say.

Another form of nasal cyst is of considerable interest and great rarity. It is characterised by the presence of an air-containing cavity in the middle turbinated bone, which enlarges to such an extent as to cause symptoms of nasal obstruction, associated or not with headache. Cases of this kind are generally, if indeed not always, met with in female patients; and examples have been described by Glasmacher, Schäffer, Heymann, Schmiegelow, Greville-Macdonald, and myself. In my own case, examination of the nostrils—for the condition was bilateral—revealed rounded tumour-like bodies, apparently incorporated with the middle turbinateds, but reaching almost to the floor of the nose. On touching these with a probe they were felt to be of osseous consistence, but yet firm pressure seemed to be followed by a sensible yielding. By means of a common awl I perforated one of the growths, and entered an air-containing cavity. This proceeding I repeated

on the other nostril. The subsequent treatment, however, differed on the two sides, for on one I removed a portion of the cyst wall, while on the other I contented myself by squeezing the walls into a shape more consistent with the normal size of the parts. Subsequently, however, the latter again returned to its original shape, and the patient disappeared from treatment dreading further operation. The etiology of these tumours is in one sense quite clear, for in the middle turbinated body air-containing spaces may and do exist. Why these should in certain cases enlarge, or whether in patients in whom this bladder-like enlargement exists the abnormality has dated from birth, are questions which await further solution, although Heymann in one case was able to observe that a gradual expansion of the air cavity occurred.

In connection with cystic enlargement of the middle turbinated body, it may be of interest to note that Bayer has described a case in which this bone was converted into a multilocular cyst containing a sticky yellow fluid, that Major has made a somewhat similar observation (the only difference being that in his case the cyst appears to have been attached to and not incorporated with the middle turbinated bone), while B. Fraenkel has placed on record an instance of cystic enlargement associated with empyema of the contained cavity.

Cystic growths in the larynx have been observed more frequently than any of the forms just described. Such neoplasms have been met with arising from the epiglottis, the ary-epiglottic folds, posterior wall of the larynx, ventricle of Morgagni, and even from the vocal cords. Yet the condition is sufficiently uncommon to warrant a brief account of a case which derives additional interest from the age of the patient.

In the autumn of 1889, a woman, aged 74, consulted me on account of loss of voice. On examining the larynx, I found a small neoplasm about as large as a pea attached to the right side and situated near the anterior commissure. Considering the age of the patient, and taking into account the absence of all other symptoms, no operative treatment was advised; it was therefore resolved merely to keep the case under observation. On November 12th, however, the tumour was found to have grown to the size of a small hazel nut, and although there was but little dyspnoea, it was evident that a corresponding further increase in size must lead to embarrassed respiration. The tumour appeared as of globular shape, greyish translucent colour, and over its surface coursed dilated vessels, the whole indicating tension. As this was the first case of laryngeal cyst I had encountered, I failed to make a diagnosis before operating. At the same time, I believe that were I again to meet with an example of this rare affection, the appearance of the tumour alone would be sufficient to indicate its character. If any doubt existed, illumination of the larynx by transmitted light would probably dispel it. Having then recognised that I had an innocent tumour of more than usually rapid growth to deal with, I sprayed the larynx with a 10 per cent. solution of cocaine, and succeeding in grasping the tumour on the first introduction of Morell Mackenzie's forceps. On pulling it outwards, the mass collapsed with the escape of some fluid, and a piece of membrane nearly as large as a sixpence came away between the blades of the forceps. The patient's voice was immediately restored, and on laryngoscopic examination it was found that the seat of attachment had been the anterior part of the right ventricle of Morgagni. In the course of last year I saw the patient, who had a perfectly sound larynx.

No doubt this was an instance of a retention swelling, due to enlargement of one of the numerous glands situated about the ventricle.

Cysts in and around the auricle have been described by various observers. Those most commonly met with seem to have been either sebaceous tumours or a variety of perichondritis giving rise to the effusion of serum between cartilage and perichondrium, classified by Hartmann among cystic formations. Whether the last named are not usually a modification of the well-known blood cysts or othæmatomata seems an open question. As pointed out by Urbantschitsch, in cases where a fistula auris congenita is present, the external orifice may become blocked and give rise to a retention tumour.

Cysts in the external auditory canal are of extreme rarity, and beyond a very general reference to the possibility of their

occurrence in the last edition of Gruber's work, and a quotation from the same by Steinbrügge, the matter does not seem to be alluded to in otological literature. I therefore make no apology for describing the following case:—

A middle-aged woman presented herself at the infirmary with a history of sudden deafness in the left ear of a fortnight's duration. On testing the hearing, the watch was not heard close to the left ear. On examination, the deeper portion of the meatus was seen to be entirely filled by a greyish tumour of tense appearance, and presenting on its surface ramifying vessels. On touching it with the probe, it was found to be insensitive, and seemed to fluctuate very distinctly. There was no history of pain or traumatism. These facts enabled me to suggest that the growth was a cyst arising from the upper and anterior part of the osseous meatus. I accordingly punctured the swelling and evacuated an apparently serous fluid. On examination afterwards the walls were seen to be entirely collapsed, and the seat of origin from the anterior superior part of the osseous meatus was manifest. Immediately afterwards the watch was heard clearly, and a whisper at 12 feet so that the patient declared she heard quite well. In this, however, she was mistaken, as shown by the amount of the hearing power and by the evidence of chronic changes in the drum membrane. She was kept under observation for several days, but no tendency to recurrence took place.

The chief interest in this case centres in the fact that a cyst arose apparently spontaneously in a situation in which it is usual for histologists to deny the existence of gland structures of any kind. Manifestly many hypotheses are conceivable, but it seems useless to speculate upon probabilities where no proof is attainable.

FIFTY CASES OF LEFT INGUINAL COLOTOMY, WITH REMARKS ON THEIR POINTS OF SPECIAL INTEREST.¹

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In giving an account of my first list of fifty cases of left inguinal colotomy, it is my intention not only to record the successes, but also to point out what I consider to have been defects, in the operation of inguinal colotomy as practised by me. I shall also show that the experience I have gained from these cases has enabled me to see how to remedy these defects.

I have further performed several right inguinal colotomies, but I do not propose to include those in this list. The same remark applies to my cases of lumbar colotomy. I have not performed this operation in many instances, for from the result of my own cases and of the cases I have seen under the care of other surgeons, I consider lumbar colotomy to be far inferior, generally speaking, to inguinal, both from the surgeon's point of view, and as regards the present and future of the patient. I am aware that the advocates of lumbar colotomy have published many cases, and that they have never admitted that there are any drawbacks whatsoever in the operations.

To me this is unaccountable, for from my own cases and others which have come under my notice it is plain that lumbar colotomy is attended with many disadvantages. These defects must have been noticed by other operators, but they have been ignored entirely, and the performers of lumbar colotomy have confined themselves to an unstinted laudation of their own method.

Statistics compiled and records published in such a manner can surely be of little or no value, for the only way to arrive at any true and valuable inference is to admit freely both the advantage and disadvantage of respective operations, to weigh them together, and to decide in favour of that method which has the least defects and the greatest merit; thus only can patients be treated in the best and soundest manner.

There is no doubt that lumbar colotomy, as well as inguinal colotomy, possesses its own peculiar advantages, and is of

excellent application in certain conditions for which it is fitted. But the choice between these two operations does not lie within the scope of this paper; it will receive full treatment in other works on the subjects which I have now in hand.

I now turn to my own immediate business, inguinal colotomy, and various points connected with the operation, which I shall discuss in the order indicated upon the diagram of cases, and these are:

1. *The nature of the disease.* 2. The ordinary inguinal colotomy as I perform it, and the occasions for the use of the supplementary operation which I have previously advocated in the BRITISH MEDICAL JOURNAL. 3. The length of the sigmoid mesentery. 4. The spur. 5. Prolapse after the operation from the upper or the lower end, or from both ends. 6. The action of the bowels, and from which end. 7. The result, that is, the duration of life after the operation.

1. It will be noticed that in my fifty cases malignant disease was by far the most frequent cause that necessitated the operation, for to it 41 cases were due; the remaining 9 cases were operated upon for ulceration with stricture, often combined with fistula so commonly associated with those diseases.

2a. *The operation as I perform it.* The distinctive feature of my own method is the extreme importance I attach to the procuring of a good spur, so as to prevent faeces passing beyond the inguinal opening into the rectum, and thus further irritating the diseased condition for which the operation is done. This question of the spur will be treated of under my fourth head.

I will now give a brief account of my method which I have so often described in detail. An incision not more than 2 inches in length is made about $1\frac{1}{2}$ inch inside the left anterior superior spine of the ilium. This I have found from anatomical research to be the best spot. The abdomen is opened, and a sponge is then introduced to keep the intestines and omentum from prolapsing, while the parietal peritoneum is sewn to the edges of the skin wound. This being done a good loop of the sigmoid is drawn out (Fig. 1), and a stitch is put through the skin on one side, then through the mesentery behind the bowel, back again through the mesentery, and is then tied to the end of the suture which has passed through the skin. When this is tightened it keeps the peritoneum of the mesentery against the parietal peritoneum and quickly adheres; thus the gut is prevented from slipping back. Then in several places around the gut is fixed by the passage of sutures through its peritoneal and muscular coats to the skin. This is one of the simplest of all the forms of operation that have been proposed and can be easily performed in fifteen minutes.

Fig. 1.

The gut next day is opened, or, if there be no distension, it can be left for three or four days, according to the condition of the patient. In a week's time, if the walls of the divided gut be too prominent, they can be cut off with scissors flush to the skin.

2b. *The supplementary operation*, as I term it. This is done to prevent prolapse of the gut through the opening, which may occur every now and then, and, if the patient is likely to live long, may be a source of great annoyance and discomfort.

It will be seen that I had performed my first eight cases

¹ Read before the Medical Society of London.