explanation of, her failure, and with it she goes to the doctor. In the circumstances it is perhaps not unnatural that chronic appendicitis should be suspected, and that the appendix should be accordingly removed. But the patient is barely recovered from the operation before the pain returns, and again she seeks medical advice. The gall-bladder now comes under suspicion, and this in its turn is removed. But again the pain returns. The pelvic organs now become suspect, and she undergoes dilatation and curettage for chronic endometritis or removal of an ovary for chronic ovaritis. Still there is no improvement, and after, it may be, a final attempt to deal with adhesions, or a laparotomy to clear up the mystery, or even removal of the colon, the conclusion is reached that the case is one of "chronic neurasthenia," and the neurologist is called in. Of course, it is not suggested that a patient suffering from an anxiety-hysteria neurosis, which is really what this condition is, is thereby immune to appendicitis or to any other condition which may require surgical treatment. I do desire, however, to emphasize the extreme importance of remembering that abdominal pain, especially in girls and young women, and even when accompanied by vomiting, may be hysterical in origin. The importance lies in the results which only too frequently follow a wrong diagnosis. It used to be thought that, even if a condition was hysterical, the performance of an operation was the right treatment, because it would cause the patient to think she had been cured. It is now realized that this is a complete fallacy, and most surgeons of experience are well aware of, and very chary of operating upon, what they call the "abdominal woman"; for it is recognized that with each operation performed upon her the prospect of cure becomes more and more remote. The emotional, querulous, introspective person whose abdomen is covered with operation scars is practically incurable, and it is tolerably certain that he or she will go through the remainder of life as a chronic, complaining, and exacting invalid, usually labelled "chronic neurasthenia." Indeed, in not a few of these patients the hypochondriacal trend develops into an incurable delusion which may render certification necessary.

IMPORTANCE OF DIAGNOSIS AND TREATMENT

Just as a psychoneurosis may be mistaken for organic disease, so may organic disease be thought to be a psychoneurosis and labelled neurasthenia, and it is very necessary that the practitioner should be on his guard against such an error. Careful investigation of the history, consideration of the symptoms, and a complete physical examination will usually suffice to prevent a mistake; but if this is not done there are several diseases of body and mind which may readily be thought to be merely neurasthenia. Amongst the chief of them are early phthisis, diabetes, Addison's disease, disseminated sclerosis, cerebral tumour, cerebral arteriosclerosis, and encephalitis lethargica. It is also necessary to bear in mind the possibility of an early psychosis of the depressive or melancholic type, or of general paralysis, or dementia praecox.

The importance of distinguishing organic disease from a functional nervous disturbance is obvious. It may, however, be asked, Is there any particular value from the point of view of the practitioner in differentiating between the various types of functional disorder which have been described? I think there is very great value, not merely as helping to a right understanding of the nature of the patient's illness, but also in regard to the practical issues of prognosis and treatment. As has been pointed out, cases of neurasthenia which are secondary to prolonged overstrain or exhausting illness almost invariably make a complete recovery, and all that is needed is rest and

appropriate treatment. In cases of this kind such drugs as phosphorus, iron, arsenic, and strychnine are often of considerable benefit. Organotherapy in various forms has been extensively used; its chief effect, however, is in stimulating metabolism, and it is very doubtful whether it has any specific action beyond this: in some cases it seems harmful rather than beneficial. The patient who breaks down from primary neurasthenia may also be restored to a moderate degree of fitness by similar means. In these cases, however, it is essential to remember that unless careful and detailed directions are given, and followed, for the proper ordering of his life so as to avoid any kind of overstrain, the patient will certainly break down again. Cases of anxiety state, on the other hand, require radically different treatment. In these an appropriate form of psychotherapy is indicated, and will usually be attended with good results. It may with considerable advantage be supplemented by the administration of mild sedatives, of which the most suitable are bromide and luminal in small doses. In these cases such drugs as strychnine, phosphorus, and thyroid are contraindicated. They will not only do no good, but may be positively dangerous. It has not rarely happened that the administration of a course of strychnine to a patient suffering from an anxiety neurosis has increased his mental unrest to such a state of desperation as to cause him to commit suicide. Cases of hysteria in which anxiety is present are also benefited to a certain extent by sedatives; but psychotherapy, on sensible lines, is the only method which is likely to yield lasting results.

Finally, I would particularly stress the importance of distinguishing between a psychoneurosis and a psychosis. The differentiation, it must be admitted, is at times far from easy, for the dividing line between the two conditions is often very ill defined. But failure to do so may be attended with very grave consequences to the reputation of the practitioner as well as by serious danger to the patient and his relatives. It is not uncommon for a patient who has been under treatment for so-called neurasthenia but who is really suffering from an early stage of general paralysis to make a sudden homicidal attack; it is still more common for a patient under treatment for so-called neurasthenia but who is really suffering from manic-depressive insanity to be found dead by his own hand.

OTITIS MEDIA DUE TO PNEUMOCOCCUS MUCOSUS

BY

I. VITENSON

REGISTRAR TO THE EAR, NOSE, AND THROAT DEPARTMENT, WEST LONDON HOSPITAL

The condition to be described, though well known, has not attracted, in this country, the attention it deserves. The stealthy onset, deceptive course, frequent complications, and high mortality of this type of infection present a clinical picture of the greatest interest and importance. It is imperative that an early bacteriological examination should be made in order to ensure a timely diagnosis. The features of this condition are ably dealt with in numerous publications abroad, but the paucity of references in English literature seems to justify the publication of this communication.

Researches into Continental literature of the last twenty-five years disclosed references to 498 cases of mucosus otitis. The bacteriological diagnosis was made by examination either of the aural discharge or of pus contained in the mastoid cells at the time of the operation. The former group supplied 154 cases (14.5 per cent.) out of

1,063 instances of acute otitis media, and the latter 344 cases (13.5 per cent.) out of 2,577 mastoids operated on. In 207 of these 498 cases where the age was given, the incidence in decades was as follows:

Decades ...	I	II	III	IV	V	VI	VII	VIII	IX
Percentage ...	5.5	8.0	14.7	15.7	16.0	20.1	16.0	3.4	0.5

The incidence is thus seen to increase with age, reaching its maximum in the sixth decade. With regard to sex, of 263 cases published by various authors, 202 (77 per cent.) were males and 61 (23 per cent.) were females.

Mucosus otitis shows little tendency towards spontaneous recovery. According to some observers, 80 per cent. of cases terminate in acute mastoiditis with or without other complications; the incidence of mastoiditis in streptococcal otitis is approximately 38 to 40 per cent. Further, in a series of 203 cases receiving operative treatment, intracranial complications ensued in 45 per cent., the usual being: extradural and perisinus abscesses 28.5 per cent., meningitis 10.8 per cent., sinus thrombosis 2.4 per cent., labyrinthitis 1.9 per cent., brain abscess 1.2 per cent. Abscesses in the deep cervical muscles were 7.3 per cent. Finally, the average mortality in 175 collected cases was 16 per cent., as against 6.6 per cent. in the contemporary literature of streptococcal middle-ear infections. Figures at the West London Hospital are of less statistical value owing to the limited number of cases. They cover eighty investigated cases of acute otitis media in the last fifteen months. Seven cases of mucosus otitis were proved, four males and three females, giving an incidence of 8.8 per cent. Their ages were: 1½, 5, 6, 16, 38, 53, and 62 years. Of these seven cases, six were operated on; the seventh recovered spontaneously. Intracranial complications have not occurred in this small series of cases, but, following the operation, two patients developed an abscess in the deep muscles of the neck.

SYMPTOMATOLOGY

The characteristic features of the disease are the stealthy onset, lack of prominent symptoms, protracted course, infrequency of spontaneous recovery, and the great disparity between its benign aspect and the extensive destruction of bone in the mastoid process. Four different types of mucosus otitis can be distinguished.

Latent Type.—The onset is mild. The initial symptom slight transient earache, followed by moderate local headache, tinnitus, progressive deafness, and sensation of pressure in the affected ear. Gradually, within a week or so, some of these symptoms tend to subside and a latent period ensues, during which tinnitus, deafness, and local hyperaesthesia remain. This period of apparent inactivity may last as long as six months, but at any time it may be broken by an exacerbation of middle-ear symptoms, with signs of mastoiditis and sometimes of intracranial complications. Thus a very deceptive condition of affairs may be present for long periods before dangerous signs and symptoms make themselves apparent. A bacteriological examination carried out in the early stage would reveal the dangerous nature of the condition. The drum is pale pink and its radial vessels injected. The normal lustre, the light reflex, and the details of the hammer are lost. It is thickened by infiltration—a most important characteristic in the clinical diagnosis of mucosus otitis—which is such that the drum may present the appearance of having been lifted outwards. There may be local bulging later, usually at the posterior superior quadrant. A scanty, mucoid discharge occurs after a spontaneous perforation or a myringotomy. The perforation generally closes during the period of latency and the drum is

approximately restored to the appearance presented before perforation or incision.

Subacute Progressive Type.—The initial mild symptoms already described gradually increase with varying intensity, and after six to eight weeks culminate in a fully developed suppurating mastoiditis. The course of the otitis is usually milder and more prolonged than in a streptococcal infection. The drum is pink and bulging, requiring myringotomy if a spontaneous perforation has not yet occurred. Aural discharge is more abundant than in the latent form, and becomes muco-purulent in the later stages. The perforation may intermittently close, causing exacerbation of pain, and requiring a further myringotomy.

Acute Type.—This uncommon type is characterized by severe initial subjective symptoms and a rapid development of mastoiditis. The drum, however, is pink and but slightly bulging, affording a striking contrast to the appearance present in a streptococcal infection. It is possible that such cases should be relegated to the first group described, the mild onset and latent period being unrecognized.

Benign Type.—About 20 per cent. of *Pneumococcus mucosus* infections of the middle ear resolve without complications. After the same mild onset and subacute course, during which there is slight deafness with moderate sero-sanguineous aural discharge, the condition clears up in three to five weeks.

DIAGNOSIS

In all cases of mucosus otitis, even in the presence of complications, the complete absence of pyrexia or insignificant variations of temperature is an important diagnostic feature. Case 1 illustrates this point, and shows that the clinical diagnosis is made with difficulty and after some delay. A syringe aspiration of the tympanic cavity (as I hope to show in a further communication) is far more trustworthy, from the point of view of bacteriological results, than the examination of aural discharge after myringotomy. Using a 1 c.cm. hypodermic syringe containing a little sterile saline or broth, and a two and a half inch needle with short bevel and wide bore, the drum is pierced at the site of maximal visible bulging, or, in the absence of bulging, in the postero-inferior quadrant. There is more resistance to penetration in mucosus than in streptococcal otitis; this is ascribed to the fact that in mucosus otitis there is a greater thickening of the drum due to cellular infiltration. In cases where a spontaneous perforation has already occurred, more reliable bacteriological results are obtained by puncturing the drum elsewhere than by examining the aural discharge which is contaminated by secondary organisms.

The sterile saline or broth permits even the smallest amount of aspirate to be collected for examination. The bacteriological routine depends on the amount of this aspirate. If it is small, plating out on blood agar is the sole procedure, with subsequent typing of organism. If sufficient, smear and hang-drop preparations, with or without type serum, may indicate a provisional diagnosis, which later work on the plate cultures qualifies. A bacteriological diagnosis having been achieved, confusion with Eustachian catarrh cannot arise, and knowledge has been gained that will ensure early and correct treatment.

The next procedure, during the latent period, is to obtain x-ray records of both mastoid regions. These provide standards of comparison for future reference, knowledge as to the cellularity of the mastoid process, and evidence of inflammatory changes. In mucosus mastoiditis there may be seen: (1) a diffuse clouding due to oedema and infiltration of the cell mucosal linings; circumscribed shadows caused by destroyed groups of cells which are being replaced by granulation tissue and pus; (3) healthy air-containing cells between diseased areas. The

progress of disorganization may be gauged by repeated α -ray examinations.

Leucocyte counts appear to be helpful, as evidence of the presence of an inflammatory process, but they usually fail to indicate pus formation, according to accepted standards. Lumbar puncture is of the same assistance as in other middle-ear infections.

The following cases illustrate the four clinical types:

Case I: Latent Type

On October 28th, 1932, the patient, a man aged 58, said that fourteen days previously he had had "a cold in the head and running nose," also slight intermittent pain in the right ear for five days. He complained of deafness in the right ear. Tinnitus and headache were limited to the right side. On admission there was nasal discharge. The right drum was pale pink, thickened, and slightly bulging at the posterior superior quadrant; whispering heard at contact; Weber to the right. The right tube was catheterized, and, a week later, as no improvement followed, myringotomy was performed, preceded by middle-ear aspiration for bacteriological purposes. *Pneumococcus mucosus* in pure culture was obtained from the aspirated pus. After ten days of scanty mucoid discharge the perforation healed, and the drum appeared practically as it did before myringotomy. A nasal swab taken on November 15th, 1932, gave a growth of *Pneumococcus mucosus*. X-ray examination after approximately twenty-eight days of illness revealed both mastoids to be well pneumatized. The right showed a diffuse cloudiness, more pronounced at the upper posterior part, with distinct loss of definition of intercellular trabeculae. Further radiograms ten days later disclosed a slight but definite advance in the destructive process. This finding, combined with lack of improvement in hearing and tinnitus, even in the absence of definite clinical signs of mastoiditis, indicated mastoid drainage. A leucocyte count did not suggest pus. At operation a typical early mucosus mastoiditis was found: scattered groups of cells filled with granulations and mucopus, and intervening air-containing cells with an oedematous mucosal lining. The affected cells were situated mostly at the posterior superior system of cells.

Case II: Subacute Progressive Type

On August 21st, 1932, the patient, a man aged 38, had had left otalgia lasting twelve hours caused by diving. The drum was pink, thickened, and bulging. Myringotomy was performed, and he was kept in hospital for eight days. At the out-patient department two days after his discharge he complained of slight earache; there was tinnitus, deafness, and headache on the affected side, accompanied by slight mucoid discharge from a perforation at the posterior superior quadrant. Whispering heard at the contact; Weber to the diseased side. His attendance was intermittent, depending on the exacerbation of his illness. The symptoms gradually increased, however, until the fiftieth day after onset of the illness, when definite signs of mastoiditis appeared. The aural discharge, which became muco-purulent, yielded a few colonies of *Pneumococcus mucosus* amidst a heavy secondary staphylococcal infection. Slight pain was present throughout, which was worse on some days than others. At operation on October 11th a very cellular mastoid with granulations and muco-pus filling the cells was found. An abscess in the deep muscles of the neck developed a week later and was drained. The pus gave *Pneumococcus mucosus* in pure culture. Four weeks later he left hospital with his condition clearing up; whispering heard at six feet. Except for an occasional rise to 100° the temperature remained between 98.4° and 99°. This is a good example of a case unrecognized as to the bacteriological aetiology until late in the course of the disease.

Case III: Acute Type

A child, aged 1½, was brought to the hospital on March 4th, 1932, with a swelling behind the left ear, which had been noticed by the mother for twenty-four hours. A left post-auricular abscess, relatively painless and only slightly tender, was found. The drum was greyish pink and thickened; details were obscured, but there was no perforation. The

temperature was 99°. At operation a large subperiosteal collection of pus, with a small erosion of the cortex leading to a mastoid cavity containing soft granulation tissue and muco-pus, was found. *Pneumococcus mucosus* in pure culture was recovered from the pus. Five and a half weeks later the child left hospital with the wound almost closed. He was brought back in five days with a temperature of 104° and a cellulitis of the scalp, but owing to lack of accommodation he was sent to another hospital, where death occurred three weeks afterwards. The important feature of this case is the presence of a mastoiditis combined with a large subperiosteal abscess of acute onset in the presence of a drum, which failed to show changes usually considered to be indicative of an acute mastoiditis.

Case IV: Benign Type

On October 31st, 1931, the patient, a girl aged 6, complained of sickness and abdominal pain; there were no physical signs; temperature was 100°-102°. Five days later the temperature returned to normal, and the child complained of slight pain in both ears. The drums were found to be pink and much thickened by infiltration; whispering only heard at contact. Aspiration of the middle ears was performed, followed by myringotomy, and both aspirates gave a pure growth of *Pneumococcus mucosus*. A sero-sanguineous discharge developed, but the perforations soon closed, and ten days after myringotomy both drums regained almost a normal appearance and whispering was heard at a distance of ten feet. An α -ray photograph showed that cell formation was present in both mastoids without abnormal clouding.

ANATOMY AND HISTOPATHOLOGY

The course and the termination of any variety of acute otitis media depends not only on the virulence of the organism and the resistance of the individual, but also on the anatomical structure of the mastoid process. Extension of an acute inflammatory process from the tympanic cavity rarely occurs in a sclerotic acellular mastoid process.

Hesse recognized three somewhat artificial anatomical types of pneumatized mastoids: (a) the normal, in which the cells gradually increase in size towards the periphery and contain a normal mucosa; (b) where the cell system is less extensive and is composed of large and small cells irregularly mixed, the mucosa being moderately hyperplastic; and (c) where the cells are small throughout and the mucosa shows a considerable grade of hyperplasia. The following percentages of these types were found in a series of 171 examples of acute mastoiditis α -rayed before mastoidectomy: A, 14 per cent.; B, 33.9 per cent.; C, 52.1 per cent. Type C is most often attacked by an acute inflammatory process. The hyperplastic mucosa facilitates bacterial invasion, and the small size of cells favours retention. It is attacked by streptococcus and *Pneumococcus mucosus* in almost the same proportion, whereas cell formation A is invaded nearly three times as frequently by *Pneumococcus mucosus* as by streptococci.

Pneumococcus mucosus induces a subacute proliferative inflammation, with an early and pronounced infiltration of mucous membranes, accompanied by moderate hyperaemia only. In the early stages exudates are sero-sanguineous or mainly mucoid in character. Resolution is slow, and there is a tendency towards organization and fibrosis. Cavities are filled with granulation tissue. Pus formation is delayed. Applying these details to the middle ear and mastoid process, the drum is thickened owing to infiltration, and pink only through the mildness of vascular engorgement. The embedding of the ossicles in the granulation-filled tympanic cavity produces a high grade of deafness, which subsides very slowly after cessation of the middle-ear inflammation. The cells of the mastoid process are irregularly filled with granulation tissue, while their mucosal linings show marked cell infiltration. As a general rule, in the early stages of mastoid infection the peripheral cells are found to be affected first, the central

cells still containing air. Later, intercellular septa are destroyed by rarefying osteitis, and eventually complete disorganization of the whole cell system is brought about. In a well-pneumatized mastoid process the cortex is thin; at any time it may be eroded, giving rise in the one direction to intracranial, in the other to extramastoid, complications. The Eustachian tube shows slight inflammatory changes in its osseous part. Its cartilaginous portion is free, with a patent lumen.

PROGNOSIS

Figures dealing with the incidence of complications and the mortality rate indicate a very unfavourable prognosis as to spontaneous recovery from mucosus otitis. Owing to the mild preliminary symptoms there is a tendency to delay surgical measures until considerable destruction of the mastoid cells has occurred, with or without other complications. The average pre-operative history extends to eight weeks, as compared with three to four weeks in streptococcal infections, but early diagnosis and early and thorough surgical measures should forestall further complications and provide better results. In any case, if mastoiditis is present a guarded prognosis is inevitable, since the smallest focus of disease that is overlooked may, even after long periods of quiescence, initiate a cycle similar in effect to that of the original otitis. All available records suggest that recovery from deafness and tinnitus is a more stubborn affair than in otitis due to streptococcal infection, because of the tendency towards organization and fibrosis.

TREATMENT

The nature of the treatment depends on the degree to which the disease has progressed. If seen at an early stage, and the condition is confirmed by bacteriological findings, an immediate myringotomy is indicated provided that a spontaneous perforation has not yet occurred. Thereafter a careful watch on the patient must be maintained, and in order to keep the case under regular observation the nature of the disease should be explained to the patient and to the practitioner. This precaution is necessary because, owing to the absence of pain and malaise, there may be some difficulty in following up the case. In the latent stage, if in five or six weeks' time the deafness, tinnitus, and infiltration of the drum have not improved, mastoidectomy should be carried out even in the absence of definite signs of mastoiditis. This intervention is justified because 80 per cent. of cases develop mastoiditis, and delay is fraught with the risk of intracranial complications. It should be emphasized that radiography is a valuable aid to diagnosis; if really good pictures are obtained the operative responsibility is considerably lessened. Later still, when signs of mastoiditis are definitely present, such as tenderness and sagging of the postero-superior deep meatal wall, mastoidectomy should be performed without delay, particular care being exercised in the removal of all the diseased groups of cells.

SUMMARY

1. Available statistics indicate that otitis media due to *Pneumococcus mucosus* is accompanied by a higher mortality rate and greater incidence of complications than other middle-ear infections.
2. This is due in part to a mild initial clinical course which is often of such slight embarrassment to the patient that he may not seek advice, and in part to the fact that a severe destruction of the mastoid process may occur without clinical signs of mastoiditis.
3. An early bacteriological diagnosis by the method described is simple in achievement and essential for control.

4. Early operation with a thorough evacuation of the diseased mastoid cells is imperative.

In conclusion, I must express my appreciation to Mr. Vlasto and Mr. Hamblen Thomas for their kindness in allowing me to use the material in their clinics; to Mr. Vlasto also for his valuable help and criticism; and to Dr. Post for the radiographic examinations.

BIBLIOGRAPHY

- Abrahams and Zelly: *Ann. Otol., Rhinol., and Laryngol.*, 1925, xxxiv.
 Albert: *Arch. Ohrenheilk.*, 1911, lxxxv, 251.
 Alberti: *Ibid.*, 1913, xcii, 111.
 Barwich and Haardt: *Zeit. f. Hals-, Nasen-, u. Ohrenheilk.*, 1926, xvi, 325.
 Denker: *Zeit. Ohrenheilk.*, 1907, liv, 200.
 Eckert-Mobius: *Arch. Ohrenheilk.*, 1927, cxvi, 270.
 Evers: *Ibid.*, 1923, cx, 169.
 Hesse: *Zeit. f. Hals-, Nasen-, u. Ohrenheilk.*, 1928, xxii. (Further literature see there.)
 Honda: *Beitr. z. Anat., Physiol., Path., u. Therap. d. Ohres*, 1910, iii, 64.
 Kummel: *Deut. Otol. Ges.*, 1907.
 Mark: *Zeit. Ohrenheilk.*, 1908, lvi, 229.
 Neumann and Ruttin: *Arch. Ohrenheilk.*, 1909, lxxix, 1.
 Stutz: *Beitr. z. Anat., Physiol., Path., u. Therap. d. Ohres*, 1923, vii, 100.
 Supfle: *Zentralbl. f. Bakt. u. Parasit. u. Infekt.*, 1906, xlii.
 Wirth: *Ibid.*, 1926, xcvi.
 Wittmaack: *Deut. med. Woch.*, 1906, 1271.
 Idem: *Zeit. Ohrenheilk.*, 1907, liv, 202.
 Zemmann: *Arch. Ohrenheilk.*, 1913, xcii, 74.

PSEUDO-CYST OF THE PANCREAS

BY

D. J. HARRIES, D.Sc., M.D., F.R.C.S.

SURGEON, CARDIFF ROYAL INFIRMARY

In 1892 Mr. Jordan Lloyd published a paper on the pathology of pseudo-cysts of the pancreas, in which he showed that these cysts are really collections of fluid in the small sac of the peritoneum, and therefore have no proper cyst wall apart from the peritoneum lining this sac. A history of injury or of an attack of acute pancreatitis is generally given in these cases. In the case described below no such history could be obtained, in spite of the fact that there was free communication between the sac and the pancreatic duct or one of its branches. When drained these cysts generally undergo complete obliteration in a few months, but sometimes the sinus persists for years. In such cases the operation described below should be given a trial, especially as the difficulties are few, and, if successful, it will relieve the patient of the discomfort arising out of the condition of the skin round the sinus.

A man, aged 57, was admitted into the Cardiff Royal Infirmary on June 22nd, 1932, complaining of loss of appetite, abdominal discomfort after food, and loss of weight. He had lost about 30 lb. since the commencement of his illness eighteen months previously. There was no history of vomiting.

On examination a large swelling could be seen and felt occupying the upper abdomen. The patient knew of the tumour, and he had a strong suspicion that it was some form of cancer. The swelling was tense, but it showed definite fluctuation.

On June 25th the abdomen was opened through a right paramedian incision, and on investigation the cyst was found to be in the lesser sac of the peritoneum, with the stomach running across its anterior surface well below the middle. The cyst was opened through a small incision in the gastro-hepatic omentum. There was no definite cyst wall apart from the peritoneum lining the lesser sac. A drainage tube was stitched in the cyst and brought out through the upper end of the incision. A few sutures were inserted near the tube, anchoring the small omentum to the parietal peritoneum. The drainage tube was removed in about a fortnight, but the sinus continued discharging thin clear fluid containing pancreatic ferments, which irritated the surrounding skin. Examination of this fluid on June 25th and August 12th showed a diastatic index of 4,000 and 6,600 units.

Attempts were made to obliterate the cyst by injecting sclerosing fluid down the sinus, but the only result was to