of yellow pus appeared. On incising the swelling an abscess was revealed, extra-dural in character and compressing the spinal cord.

The only other pathological findings were multiple small pyogenic foci in the upper lobes of both lungs. The left upper lobe was firmly adherent to the parietal pleura and two other ribs were involved in the inflammation.

Bacteriological examination of the pus revealed pneumococci.

This would appear to have been a case of bilateral bronchopneumonia with an associated extra-dural abscess producing the paraplegia.

I wish to thank Lieut.-Colonel M. W. S. Bisdee, O.C., Connaught Hospital, for his permission to publish these observations.

A CASE OF SUBMAXILLARY CELLULITIS INVOLVING TRACHEOTOMY

BY

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THE patient was referred to hospital following removal of a lower left third molar two weeks previously, swelling and pain having persisted, and no relief being obtained from intra-oral incision and curetting of the socket area.

CONDITION ON ADMISSION

12.30 p.m., April 1, 1950. There was a large swelling at the angle of mandible, extending to side of neck. The cheek was thickened and inflamed, $\lfloor\overline{678}$ were missing, and in the $\lfloor 8$ socket there was a crushed Penicillin tablet and cotton packing. Temperature 98°, Pulse 100.

History was of a difficult extraction approximately three weeks ago.

TREATMENT

Penicillin was prescribed, 100,000 units four-hourly intra-muscularly and frequent hot saline mouth washes.

At 6 p.m. the patient was reported as having difficulty in breathing, with commencing stridor—use of accessory muscles of respiration was very evident. Temperature 103·2°, Pulse 114, and the fauces were very swollen. It was not possible to view the larynx although there was no apparent trismus.

The surgical specialist was called upon and under local anæsthesia the angle swelling was carefully explored by aspiration needle, but no pus could be found, and none expressed intra-orally.

The patient's condition was deteriorating and it was decided that a tracheotomy must be performed immediately. This was done under local anæsthesia without much difficulty, the patient being intelligent and very co-operative. Despite its anticipation, the relief in breathing was dramatic.

An augmentary dose of 1 million units penicillin was given and sulphathiazole commenced, 2 grammes immediately, and 1 gramme four-hourly.

The temperature at midnight was 100·4° and a sedative was given to assist rest, a well propped up position being maintained in bed.

2.4.50. The patient had a good night without disturbance, and was given a second

dose of penicillin at 10 a.m. Temperature 100°. There was some irritation from the tracheotomy tube and a fair amount of mucous discharge. A white cell count was taken and returned as 8,700 but not regarded as reliable, and a repeat ordered.

3.4.50: Swelling of angle of jaw and neck remain relatively unchanged, and X-rays were taken. Antiphlogistine dressing was applied to the neck and angle in an attempt to localize any pus. The medical specialist was asked to investigate the chest, and X-rays of this area were also taken. At midnight the patient was feverish, Temperature 103°, and in the absence of improvement from previous chemotherapy a change was made to streptomycin in ¼ gramme four-hourly. Penicillin maintained at 100,000 units four-hourly.

4.4.50: Temperature reduced to 101° and patient appeared improved, but there was only a slight change in the swelling. The dressing of antiphlogistine was discontinued. No abnormality in jaws X-rays.

5.4.50: Temperature 100°, swelling reduced and much softer. Very hard swelling of submaxillary lymph node detectable. Medical Specialist reports signs of early pneumonia, with congestive changes in both lung bases. White cell count 12,500. Chemotherapy to continue.

6.4.50: Temperature 99·4°, pulse 106. Swelling of glottis resolved, and only a slight swelling of anterior pillar of fauces

The tracheotomy tube was removed and a dry dressing placed, covered by strapping. Streptomycin changed to ½ gramme b.d., penicillin 100,000 units six-hourly.

8.4.50: Temperature normal, neck dressing dry, wound healed well. Postural drainage of lungs commenced yesterday by medical specialist.

10.4.50: Lung bases clearing, only slight swelling of left angle of mandible, lymph node still hard, but no cervical chain. Chemotherapy discontinued.

Total dosages ... ... 7·25 grammes streptomycin
4·8 million penicillin
14 grammes sulphathiazole

Further recovery was steady but uneventful. The third molar socket is completely healed, and further X-rays disclose normal bone condition of the jaw. Patient discharged 19.4.50, to return in two months, when arrangements will be made for plastic repair of tracheotomy scar.

Throughout the whole course of the illness, no pus was found and the chemotherapy was originally instituted for prophylaxis. The change to streptomycin was made empirically and with obviously dramatic results.

The case is considered worthy of report in that the comparatively rare operation of tracheotomy was necessary, and the value of the new drug demonstrated.

Cases of pneumonia where the latest white blood cell count, with a polymorphonucler leucocytosis, is nearer 20,000 c.mm. than 7,000 c.mm. are frequently sulphonamide/pencillin sensitive. I have no experience with chloromycetin or eureomycin. Cases with a marked neutropenia may be part of a general septicæmia which on occasion is due to a sulphonamide/penicillin sensitive organism, but the fulminating nature of the infection has depressed the body resistance, and only after adequate sulphonamide-penicillin therapy does a polymorphonuclear leucocytosis occur. Similarly a case presenting with a polymorphonuclear leucocytosis in the peripheral blood may be due to a septicæmia which might pass unnoticed if blood culture is omitted and the organism is sensitive to sulphonamide/penicillin when these drugs are exhi-

bited. Accordingly in cases of pneumonia, blood culture, stool and urine culture, examination of the blood for parasites, skiagrams of the chest and various serological tests may have to be carried out to establish the true diagnosis. They should always be considered. Diagnosis of a case of pneumonia on clinical, radiological and incomplete laboratory investigations is unsatisfactory. This was strikingly demonstrated in a series of cases published in the *B.M.J.* as cases of "Primary Atypical Pneumonia." It appears that samples of blood from random cases in this series were sent for examination for evidence of the "Q" fever. After the paper was published the results of the serological tests were made known and found to be positive for "Q" fever. This was acknowledged in a subsequent letter to the *B.M.J.*, November 1, 1947, page 694.

In these days of wonder drugs we must not succumb to the tendency to give a "cure all" or "near cure all" such as aureomycin is said to be and forget all about clinical signs and symptoms, radiological and laboratory investigations, and indeed forget all about a diagnosis—at least the true diagnosis. We must discourage the attitude "never mind the diagnosis; get on with the treatment, and whether that works or not why worry as long as the patient recovers." Some may call that Medicine without Tears, Toil and Sweat. There is another name for it.

I agree that adequate or empirical therapy should not be withheld a moment longer than is necessary, but then in a properly managed case treatment is not delayed. Such cases are quickly assessed on admission, all necessary investigations instituted and treatment is exhibited, especially in cases of urgency, with all speed. The passage of time reveals whether or not treatment has been of value, the results of investigations and whether or not further investigation or precautions are necessary. These have already been enumerated.

I feel that the different causes of pneumonia are not sufficiently stressed in Medical Schools, as judged by their management by young doctors launched on the public with a good knowledge of the physical signs of pneumonia but with an inadequate appreciation of their many possible causes. After all, pneumo-typhoid managed as a case of lobar pneumonia, although probably not common, is a potential danger as long as it is not recognized, at least to contacts immediate or remote. The same can be said of pneumo-typhus. It is agreed that common things are most common, but nevertheless it is essential that we should be able to recognize or suspect not so common or uncommon diseases, especially killing diseases; not just out of academic interest but in the interests of the patient and his contacts.

The first case of pneumo-typhoid I ever saw was when I was a House Physician just when Prontosil Rubrum had appeared on the market but before M&B 693 had made its appearance in hospitals. The patient was a young woman who, clinically and radiologically, appeared to be a case of "Lobar Pneumonia." The total white blood cell count was 13,400 c.mm. and there was a polymorphonuclear leucocytosis. She appeared to make satisfactory

progress and the temperature became normal, but after a few days there was a recurrence of pyrexia. She became delirious at night and deafness became obvious. Radiologically consolidation remained and on auscultation redux crepitations were audible, but no complications were discovered beyond the "unresolved pneumonia." In a hospital corridor I met an honorary consulting physician long since retired. We exchanged the time of day and he asked me if I had any interesting cases. I told him about the case of pneumonia which was causing trouble. *I mentioned the deafness.* At this he showed considerable interest and he said "Ah, pneumo-typhoid. Never forget typhoid or typhus fever in a case of pyrexia who becomes deaf without apparently obvious cause." The necessary investigations were initiated and the diagnosis of pneumo-typhoid confirmed. The patient made an uninterrupted recovery and, but for that chance meeting, would probably have been diagnosed a lobar pneumonia and its true nature never established.

As already mentioned, typhus fever is another important pitfall especially when no rash appear to help in the diagnosis. However, a palpable spleen in pneumonia is not usual but, in my experience, it is inevitable in typhus fever. As a rule, all cases with chest signs or pneumonia with associated splenomegaly normally require thorough laboratory investigation.

Slipshod and vague diagnoses are to be deprecated. In B.L.A., I remember one A.D.M.S. instructing me to visit a large German P.O.W. Hospital where the German doctors had diagnosed several cases of "Enteritis," "Diarrhœa" or "Dysentery." When I saw them the diagnosis in the majority was obvious. They were still febrile, rose spots were present as was splenomegaly. Laboratory investigation established the diagnosis of enteric group fever. In my limited experience of German G.D.M.O.s I found that they were rather apt to make a diagnosis on slender grounds, to pronounce their diagnosis in a confident manner and to stick to it at all costs. There was no compromise. However, this attitude is not just confined to the Germans. Other examples of this were cases referred to a hospital, where I was O.i/c Medical Division, as cases of nephritis. They had been treated virtually by starvation and forced fluids a la Vollhard and Farr, which Germans advocate in the treatment of acute glomerulo-nephritis with oliguria or anuria. In no case was there hypertension and in every case the urinary output was normal and the urine contained no abnormal constituents. There was œdema, however, and the diagnosis was nutritional œdema in every case! A few other "diagnoses" which can be badly used and misapplied are benign lymphocytic meningitis, serous meningitis, non-paralytic poliomyelitis, unless all relevant tests, which include Paul Bunnel reaction and serological tests for leptospirosis, etc. etc., have been carried out.

I believe that the diagnosis "Pneumonia" or "Lobar Pneumonia" is just as vague and as inadequate as a diagnosis of tachycardia, headache and pyuria, all of which are accepted in the official Nomenclature of Diseases. These

are signs and symptoms, and signs or symptoms cannot be considered to be a disease and therefore used as a diagnosis.

Everyone recognizes that in enteric group fever we should isolate the casual organism and so establish the diagnosis with certainty, even although chloromycetin may have been exhibited very early on in the disease, and righly so. I submit that similarly in pneumonia we should pursue all relevant investigations necessary to discover and recognize the ætiological agent as far as modern knowledge lends itself. Should we all do this we would be able to diagnose our cases and know what we are treating, which is surely what is expected of a doctor.

My object in writing this short paper is to emphasize that a diagnosis of Lobar Pneumonia without all necessary steps being taken to demonstrate its cause, or likely cause, is as adequate as is a diagnosis of "Backache," "Indigestion," "Hæmaturia," "Gastric Stomach," etc. etc.

Briefly, lobar pneumonia is merely a P.U.O. with signs in the chest and should be approached, assessed, and investigated as such.

The closer the liaison between the pathologist and the physician as evidenced by the frequent appearance of the former in the medical wards and of the latter in the laboratory the greater will be the incidence of accurate diagnosis in infected diseases, while certain "rare" conditions will become less rare.

ACKNOWLEDGMENTS

Colonel A. Simson, late R.A.M.C., A.D.M.S., Lowland District, and my Commanding Officer Lieut.-Colonel M. J. Kohane, *M.C.*, R.A.M.C., for permission to forward this paper for publication. Miss J. Russell, B.R.C.S., for typing this paper.

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At Random

CONTRIBUTIONS

"What! Write a contribution for the Corps Journal? Oh no, I am sorry, but I really don't think I could possibly write an article. I am no good at writing and, besides, what could I possibly write about? I've no special subjects on which to write,"

or

"I really haven't time and have too much to do; besides, I have no notes on any good cases or experiences."