from patients who walked into my surgery complaining of "influenza" and not apparently very ill. All the swabs were examined for me at one of two recognized pathological laboratories.

The following are short notes on a few selected cases:

Case 1.—A child about two years old was brought by its mother. It was pale, listless, and evidently seriously ill. No physical signs could be found in the chest or throat. A swab taken from the nose was found to be positive for diphtheria.

Case 2.—A Royal Marine who came to my surgery said he was suffering from "flu." I took a swab from his nose and told him to come to me again the next day. He did not return, but the swab was found to be positive. A few days later I received an urgent letter from his C.O. saying that the man had returned to duty and had related what had happened, and I gave particulars as requested, but so far nothing more has been communicated to me on the subject.

Case 3.—A soldier on leave, seen in bed, complained of headache and nose bleeding. There was considerable pyrexia. The throat was red, but there were no physical signs in the chest. A swab was taken from the nose. After a day or two dullness and fine crepitations were found at the left base, and a positive report was returned by the pathologist with regard to the swab. The sputum was rusty and was found to contain Klebs-Loeffler bacilli.

Case 4.—A soldier complained of pain in back and legs and cough. There was a mitral systolic murmur and the heart was somewhat dilated. He had an up and down temperature (maximum about 102°) for a few days. A swab taken from the nose was found to contain diphtheria bacilli.

Case 5.—A soldier, who had been gassed, complained of sore eyes and throat; the tongue was furred and the breath foul. He was pale and very ill. He had an up and down temperature (maximum about 103°), and in a few days began to develop phlebitis in the left leg. A swab taken from the nose was found to contain Klebs-Loeffler bacilli.

Case 6.—A soldier, who had been gassed and was suffering from ophthalmia, had pyrexia reaching 104°. A swab was taken from the nose and diphtheria bacilli found.

Case 7.—A soldier, complaining of influenza, had a mitral systolic murmur. There were a few râles in the lungs, and he expectorated rusty sputum. There was moderate pyrexia which subsided after a few days. A swab was taken from the nose and diphtheria bacilli found.

Case 8.—A man, whose illness had been diagnosed influenza, complained of sore throat. A swab taken was found to contain *B. diphtheriae*.

These are only a few typical cases out of a large number of similar ones which have come under my notice, and I am persuaded that a large number of the deaths recorded as being due to influenza during the present epidemic were due to diphtheria.

Some show a tendency to make light of nasal diphtheria, but there can be no doubt that it is a condition which is fraught with grave danger not only to the patient, but also to others with whom he may come into contact, and it is all the more dangerous because, as I gather, there are comparatively few practitioners who look for it.

Some years ago there was in this town an epidemic of mumps. In all cases that came under my notice I took swabs, and in many proved that the real cause of the swelling of the glands was diphtheria. I was called to see a boy who had died suddenly. No doctor had seen him, but his mother had been treating him after her fashion for mumps. A swab taken from the nose after death gave a positive result for diphtheria. About the same time I was called to see a baby who had died suddenly. The history was not very definite. The child had been ailing a few days, but its condition had not given much anxiety and no doctor had been sent for previous to its death. A swab taken from the nose was found to contain diphtheria.

At a discussion on influenza at a meeting of the Royal Society of Medicine on November 13th, reported in the BRITISH MEDICAL JOURNAL of November 30th, p. 603, Dr. B. H. Spilsbury said that

He regarded the condition as a primary infection of the air passages by Pfeiffer's bacillus, the failure to find this organism in 40 per cent. of his *post-mortem* cases being due either to the search not being sufficiently thorough or to the organism having disappeared before death.

It would be interesting to know whether in those *post-mortem* examinations Dr. Spilsbury examined the nasal fossae, and, if so, whether he examined them for the presence of the *Bacillus diphtheriae*.

SPONTANEOUS PNEUMOTHORAX IN THE COURSE OF INFLUENZAL PNEUMONIA.

BY

F. PARKES WEBER, M.A., M.D., F.R.C.P.

THE occurrence of pneumothorax in connexion with an attack of pneumonia or bronchopneumonia is so rare that the following case is worthy of record:

F. M. K., aged 38, a strongly built man, a mechanic and a good wrestler, was admitted to hospital on October 31st, 1918, with a temperature of 103.6° F., pulse 96, and respiration 28. He had apparently been laid up with influenza since October 26th. Two grains of quinine were ordered three times a day, and a mixture containing some sodium salicylate was given also. On the morning of November 2nd slight crepitation was heard over the lower parts of both lungs behind. The temperature was 103° F., pulse 100, respiration 24. The urine contained a trace of albumin and some hyaline and cellular tube casts. On November 3rd there was marked dullness on percussion over the back of the lower lobe of the left lung, and on November 5th there was much crepitation over the same area. From the time of admission to November 5th the temperature varied between 101° and 105° F., pulse 92 to 120, respiration 24 to 36.

On the early morning of November 6th the temperature was only 98.4° F., but the pulse was 128, and the respiration was 48. At 11 a.m., when I examined him, he was sitting up in bed, extremely dyspnoeic, cyanosed, and anxious. The cardiac apex beat was extremely displaced to the left; the right side of the thorax was resonant, but moving much less than the left side. On auscultation of the right side the breath sounds, heard rather faintly, were of somewhat amphoric character. Evidently there was pneumothorax on the right side (previously the better side of the two), though the bell sound was absent. On introducing a cannula into the right pleura, air bubbled out from the end of the attached tube (under water); more air was removed by aspiration. Normal breath sounds were then heard over the right side of the front of the chest, the heart was less displaced, and the extreme dyspnoea was partially relieved. In the afternoon the temperature was 103° F., pulse 120, respiration 40. On the morning of November 7th there was evidently relatively little air remaining in the right pleura, but decided dullness in the right infrascapular region indicated the presence of fluid pleural effusion. The cardiac apex beat was still moderately displaced to the left. The temperature was 102.4° F., pulse 134, respiration 40. There was a tendency to delirium. In the afternoon the temperature was 102° F., pulse 130, respiration 42. The patient died at about 6 o'clock on the following morning (November 8th).

The necropsy showed fibrinous deposit with a moderate quantity of sero-purulent fluid in both pleurae. The greater part (lower portion) of the left lung was solid (red hepatization) from pneumonia; there were likewise in that lung a few small scattered abscesses. There was no consolidation in the right lung, but in the lower part of the upper lobe were several small abscesses, some of which were subpleural—that is to say, situated quite superficially beneath the visceral pleura. I did not see the actual opening, but doubtless it was the bursting of one of the superficial (subpleural) abscesses which gave rise to the pneumothorax. There was no free air in either pleura, and the heart was not obviously displaced. The heart was slightly hypertrophied (weighing 13 oz.), doubtless as a result of the patient's previous athletic habits.

A case of pneumothorax occurring in connexion with an attack of pneumonia was recorded by Ménétrier and Pascano in 1915,¹ but in that case (a man aged 54) according to the findings at the *post-mortem* examination, the pneumothorax was probably due to the bursting of a superficial emphysema bulla during an attack of lobar pneumonia. Another case, in a bricklayer aged 40 years, was recorded by C. B. M. Aldridge in 1915.² The patient recovered. Recovery also took place in the case of a man, aged 35 years, described by R. G. Hann.³ Hann adds summaries of several cases previously recorded, and quotes Black's collection of 918 cases of pneumothorax, in which not a single one is ascribed to pneumonia. Out of 7,868 cases of pneumonia, collected for statistical purposes by the Royal Society of Medicine, pneumothorax was a complication in three cases only, two of them proving fatal.⁴

At a meeting of the Philadelphia Pediatric Society on January 12th, 1909,⁵ C. H. Weber and C. Y. White reported the case of a child, aged 3½ years, suffering from pneumonia, in whom pneumothorax occurred on the eighth day of the disease without any paroxysm of coughing or other unusual effort. The necropsy showed a perforation near the lower border of the upper lobe of the left lung. The neighbouring pulmonary tissue was consolidated by pneumonic infiltration.

A case of pneumothorax complicating bronchopneumonia in a boy, aged 2 years, was described by Dr. Alice Sanderson in 1911.⁶ She refers to twelve published cases of pneumothorax in children under 16 years, but none of these seemed to be due to pneumonia or bronchopneumonia. O. Meyer, in 1916,⁷ reported two cases (one of them fatal) of pneumothorax in children resulting from influenzal lung affections. Sidney Matthews⁸ (1918) reports the case of a girl, aged 7 years, who recovered from pneumothorax of the left side following an attack of bronchopneumonia after whooping-cough and measles.

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Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

SURGICAL EMPHYSEMA IN A FATAL CASE OF INFLUENZA.

DR. GARRETT'S case in the *BRITISH MEDICAL JOURNAL* of December 21st, 1918, p. 686, suggests the publication of these notes.

A strong, healthy girl aged 19, who in August last was able to swim two miles in the sea, was taken ill with influenza on November 19th. Two of her sisters were taken ill at the same time and developed pneumonia.

On November 21st the patient had well marked bronchitis and bronchial asthma, and on November 22nd pneumonia. During the night of November 23rd she suddenly became very collapsed, and from this time until she died it was scarcely ever possible to count her pulse. Cyanosis and pallor were very marked.

There was very great dyspnoea, aggravated by the slightest exertion, so that it was not possible to turn her over to examine the back.

On November 25th surgical emphysema of the face, neck, and upper part of the chest was discovered, and there was resonance over the mediastinum. The emphysema gradually diminished. She was kept alive by brandy, oxygen, and injections of pituitrin and digitalin until December 2nd, when she died. There was no *post-mortem* examination.

The surgical emphysema appears to have been due to a leakage of air from the lower part of the trachea or a main bronchus in the mediastinum. I think it occurred on the night of November 23rd, and caused the sudden collapse which then took place.

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A CASE OF INVERSION OF THE UTERUS.

I RECENTLY received an urgent notification from a midwife to visit a case. The midwife informed me that the labour had been slow but otherwise normal until, less than five minutes before my arrival, there was a severe pain followed by rapid delivery of placenta and collapse of the patient. The midwife having received the placenta and uterus in a flamed container, maintained her position, and ordered a relative to get stimulants, to apply hot bottles, and to raise a minimum of dust.

Shock was profound; the radial pulse was not palpable, respiration was shallow and apparent in epigastrium only, the conjunctival reflex was absent. A diagnosis was made by inspection alone. Provided with india-rubber gloves but no means of rapidly sterilizing them, a three-second scrub up in lysol solution was substituted. The placenta was completely separated, the membranes covering the everted surface of the uterus non-adherent, and there was no bleeding. Reduction proved easy, and was followed by a strikingly rapid recovery from the shock.

According to Atthill (Tweedy and Wrench), "In order for inversion of uterus to occur, it must be in a partially atonic condition and the placenta situated on the fundus." In this case the woman was 19 years of age, of poor physique, and had given birth to her elder child in her sixteenth year. I feel justified in assuming that a partially

atonic condition did occur in this case. The placental site was at the fundus and somewhat anterior.

The midwife protests that she felt the fundus immediately after delivery, then turned her attention to the child, and did not again interfere with the mother until, warned by the sudden severe pain, she seized her flamed container, and was just in time to place it in position to receive the placenta, etc. This statement may be taken to exclude any possibility of pulling on cord or pressure on fundus.

The salient features in treatment to be learnt from this case were (1) immediate reduction of uterus; (2) the masterly inactivity of the nurse, which minimized the risk of sepsis; (3) the necessity of a general practitioner providing himself with some "always ready" sterilized package to contain gauze and gloves. The woman did not become septic, and made an uninterrupted recovery.

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J. A. WATSON, L.R.C.P.

Reports of Societies.

WAR SURGERY OF THE LUNG.

At a meeting of the Section of Surgery of the Royal Academy of Medicine in Ireland, with Sir JOHN W. MOORE in the chair, Colonel WILLIAM TAYLOR briefly reviewed the surgery of the lung as carried out at the front. He showed that the change was simply that of harmonizing or adapting the principles of surgery, as they are now applied to other wounds, to those of the lung or chest. It was estimated that the mortality due to chest wounds at the regimental aid posts varied from 25 to 30 per cent.; at the casualty clearing stations it averaged about 18 to 20 per cent., while at the base hospitals it was about 10 to 12 per cent. The average general mortality of chest wounds was about 18 to 20 per cent. This high mortality was due to the fact that shell wounds preponderated over bullet wounds to the extent of 3 to 1. The mortality of shell wounds as compared with bullet wounds was as 14 to 1; it was the risk of sepsis in connexion with shell wounds that rendered them so dangerous. The mortality was highest during the first forty-eight hours. Open wounds of the chest were grave as compared with closed wounds; they were at least twice as dangerous. Lung wounds, like other wounds, were contaminated by the mere entrance of the foreign body, whether retained or not. Like any other wound, there was an area of necrotic tissue which formed a culture medium for the growth of organisms. Twenty-five per cent. of wounds of the lung proved fatal from haemorrhage and asphyxia. Surgeons now endeavoured to arrest the bleeding by direct surgical intervention at many casualty clearing stations. It had been shown that the operation of thoracotomy has little or no effect upon external blood pressure. Operations could be performed successfully upon the chest and lung in patients with a blood pressure as low as 50 mm. Hg—a point of great practical importance. The gravity of the prognosis of lung wounds was much increased by the frequency with which pleuro-pulmonary lesions of the opposite side occurred. Infection of the haemothorax in bullet wounds was exceptional. With an opening in the thoracic wall an aerobic infection from without was added to the anaerobic infection arising from the pleuro-pulmonary wound; it was partly on this account that open wounds of the thorax were so dangerous. The gravity of chest wounds from the fifth day onwards was due to pleural suppuration much more than to infection of the lung itself. The treatment of punctured wounds of the lung depended upon whether the wound was superficial, whether the foreign body was retained, or whether the case was one of the through-and-through type. The foreign body was removed when possible together with fragments of bone and pieces of clothing. The track was cleansed and the opening into the lung carefully closed. Primary extraction of all foreign bodies from the lung must be considered the rational treatment for preventing infection. Access could be gained to the lung most satisfactorily by an incision from the mid-axillary line to the parasternal region over the fifth rib. Several inches of the rib were excised, and the ribs above and below widely retracted. Openings in the diaphragm must be closed. The entire pleural surfaces should be wiped clean and the