and presented no features of interest. Three weeks after the temperature became normal the patient was able to perform light duty.

The points of clinical interest in the case are the sudden onset of an acute illness following inoculation, for which no other cause could be found; the insignificance of the local symptoms at the site of inoculation; and the almost total absence of any physical signs which would account for the acute condition and the intensity of the headache. It is noteworthy that for many months up to the time of inoculation the patient was in particularly robust health and that he had been inoculated five months previously with very little disturbance, whether local or general. That the illness following inoculation might be merely a coincidence is, I think, negated by the preceding good health, and also that the earliest symptom, the headache, showed itself when the early symptoms of reaction after inoculation usually appear. The patient was seen by several medical men and much discussion ensued as to whether it was a case of true typhoid infection, an atypical case of typhoid fever, or whether the condition was a toxæmia following inoculation. This latter was the prevailing opinion. The possibility of malaria was also discussed but was considered improbable, as the patient had never shown any indication of it nor had he resided in a malarial region. Throughout the illness resembled a moderately severe attack of typhoid fever, while the typical symptoms—bronchitis, rash, splenic enlargement, tumidity and tenderness of the abdomen, and diarrhoea—were absent; the headache, insomnia, restlessness, marked prostration, the absence of physical signs of any demonstrable lesion, and the range and type of the temperature, all pointed to the possibility of typhoid fever. Moreover, the convalescence approximated to that following a mild attack of typhoid fever. Although there were no complications except the urticarial attack the feeling of weakness was prolonged and the normal health was not regained until six or eight weeks later. It is a reasonable conclusion, therefore, that the case was one of toxin poisoning following antityphoid inoculation. The course of the temperature was as follows: August 27th, injection given at 5 P.M.; 30th, temperature, 3 P.M., 103.4° F.; 31st, morning 102.2° , evening 104° ; Sept. 1st, morning 102.2° , evening 104° ; 2nd, morning 101.2° , evening 103° ; 4th, morning 100° , evening 102.2° ; 6th, the evening temperature this day was 99° , and except for a rise on the 8th to 100.2° , when the patient was moved from the ship to the hospital ashore, the temperature never afterwards rose above 99° .

That a severe reaction does occasionally occur after inoculation is well known. In a series of 511 cases² the reaction—severe or slight—commenced on the day of inoculation, the severity of the symptoms being greatest at first and gradually subsiding to normal on the third, or at latest fourth day. Further, it is held³ that the severity of the local symptoms is in inverse ratio to the severity of the constitutional symptoms and that second inoculations are usually followed by local symptoms only. The case under consideration appears to be in direct contrast to these conclusions. Wright⁴ maintains that when primary inoculations are made with small doses the local and constitutional symptoms are usually absent. I am not in a position to discuss this point. From my own experience, derived from performing inoculations on troops proceeding to South Africa, I have thought that the factor of age had an influence on the severity of the reaction. It seemed to me that young patients were much more liable to severe reaction than older men. The cases of severe reaction generally occurred amongst young soldiers, officers and men of, speaking roughly, 25 years of age and under, while of the few older men of from 35 to 50 years that I inoculated none complained of any discomfort locally or of constitutional disturbance.

The case here reported seems to me to have important bearing on prognosis. Medical officers were constantly asked by officers on board (the men either refused the operation or submitted to it without inquiry) two questions: (a) Does inoculation prevent typhoid fever? and (b) Does inoculation cause illness at the time of operation or later? To (a) one could only reply that the protective influence was doubtful but probably existed and that inoculation was the only prophylactic treatment we could then administer; to (b) that, with the possible exception of two or three days' discomfort, there was no risk of illness, immediate or remote.

Both replies, I now think, were incorrect. Cases of severe reaction lasting three or four days are not uncommon and I have met with some where the patients declared that they did not feel perfectly "fit" for at least ten days afterwards. These, together with the case detailed above, have convinced me that however harmless inoculation may appear to be in many cases it is not an operation to be lightly undertaken. Of the prophylactic efficiency of the procedure I am sceptical. From the large number of cases of typhoid fever which I saw amongst inoculated men in three general hospitals in Natal and amongst new drafts of young soldiers joining their units in the field within three to six weeks of their arrival in South Africa I can only say that I am not convinced of the power of inoculation to mitigate the severity of an attack or to influence the liability to relapse and death. Many civil surgeons with whom I have discussed these questions held similar views. An important point is Wright's suggestion⁵ that when inoculation is followed by well-marked constitutional symptoms there follows a negative phase of decreased bactericidal power of the blood with increased susceptibility to typhoid infection; that this increased susceptibility lasts about three weeks and much longer when the symptoms of reaction have been very severe. Now a large percentage of the troops were inoculated on board transports ten to 14 days out from Cape Town. Hence on disembarkation a considerable number of men were exposed to virulent infection at a time when their powers of resistance were very considerably lowered. Hence, if Wright's view is correct, we were unwittingly undertaking a very grave responsibility. On the other hand, Washbourn⁶ maintained that the bactericidal power of the blood was not a measure of the immunity of the individual. From the large number of inoculated men that one saw suffering from typhoid fever within six weeks of their arrival in South Africa it would seem that Wright's view of the existence of such a negative phase was possibly correct.

Bromley, Kent.

Clinical Notes: MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF WOUNDING BY AN UNUSUAL PROJECTILE.

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THE patient was one of two men who were injured in a pit accident. The circumstances connected with the accident were as follows. A hole 18 inches long was bored in the roof of a coal seam for blasting purposes. Into this hole was placed a "kynite" cartridge, which, after "stemming," was intended to be fired by an electric battery. The two men were engaged in "stemming" this hole when, probably from the cartridge becoming displaced, the explosion occurred prematurely. The man actually engaged in "stemming" was killed outright, his head and right hand being blown off; the other, who at the time of the explosion was standing a few feet from his unfortunate companion, was knocked down and immediately brought to the hospital in the ambulance wagon belonging to the pit. He was supposed to be suffering from compound fracture of the left thigh. On casual examination in the accident room he was found to have a ragged wound on the anterior surface of the left thigh such as might have been produced by protrusion of the lower end of the upper fragment of the femur, and this view was rendered more probable when the patient stated that after his injury he had attempted to walk but had to lie down on account of pain. Although there appeared to be little or no shortening of the limb and no undue mobility, it was concluded, when on further examination a loose fragment of bone was seen in the depth of the wound, that the diagnosis of compound fracture was confirmed. The patient was admitted and the limb shaved and cleansed

² Cullinan, quoted by Wright, THE LANCET, Oct. 26th, 1901, p. 1107.

³ Wright, Practitioner, vol. lxxii, No. 3, p. 358.

⁴ THE LANCET, Sept. 14th, 1901, p. 715.

⁵ Loc. cit.

⁶ Transactions of the Medical Society of London, vol. xxv., p. 21.

in the usual way. The wound was explored and found to extend in an inward and upward direction. The piece of bone already seen was found to be loose and connected merely by a tag of fibrous tissue; this was severed and the piece was removed. It measured one and a quarter inches by a quarter of an inch by one-eighth of an inch and had one smooth surface. The curvature of this surface, however, did not correspond to that of the shaft of an adult femur. The wound was further explored and a mass detected in its upper part; this was removed and found to be a finger represented by the two terminal phalanges with about three inches of the flexor tendons attached. The first piece of bone was now recognised to be part of the proximal phalanx of this finger. The wound, which was fully five inches in depth, was douched out with solution of carbolic acid of strength 1 in 40 and lightly plugged with iodoform gauze. It healed without suppuration.

The patient was not otherwise seriously injured. On admission he suffered from shock but was conscious and described how at the time of the accident he had been struck by something and knocked down. The whole of the anterior surface of the body was peppered as if by small shot. These marks on the body corresponded to small holes in the vest and trousers he was wearing at the time, and corresponding to the wound in the thigh there was an angular flap in the trousers where the projectile had gone through without actual loss of substance to the garment. The patient was aware that his comrade had been killed but was not aware that he himself had been shot in the thigh by the dead man's finger.

I am indebted to Mr. F. C. Collinson, honorary surgeon to the hospital, for permission to publish this case.

Rotherham.

A CASE OF LIPOMA IN THE RIGHT VENTRICLE OF THE HEART.

By R. ADAMS BREWIS, M.D. EDIN.

THE following case of fatty tumour growing from the interventricular septum of the heart seems worth publishing as I have been unable to find a similar case occurring in the human subject in medical literature. Paget¹ mentions "a singular case of fatty growth connected with the heart of a sheep." In describing the specimen he states: "The right ventricle is nearly filled with a lobulated mass of fat, distending it, and pressing back the tricuspid valve. The left auricle and ventricle are similarly nearly filled with fatty growths and fat is accumulated on the exterior of the heart, adding altogether about 25 ounces to its weight. The textures of the heart itself appear healthy."

The patient in the case now to be described was a girl, aged seven months. She seemed well until 2 P.M. on June 16th, 1905, when she vomited some "yellow bile" and refused the breast. After 9 P.M. she seemed worse and began "turning up her eyes." The parents, fearing a convulsion, sent for me, but on my arrival at 10.10 P.M. I found life extinct. The child was pale. The mother said that there had been no cyanosis. Two months previously the child suffered from a severe attack of whooping-cough. The coroner, Mr. E. M. Grace, ordered a post-mortem examination, which was made 41 hours after death. The body was well nourished, hypostatic congestion was somewhat marked, the abdominal organs were in the normal position, and there was no peritonitis. The external surface of the stomach was healthy; it contained four fluid drachms of semi-digested milk; its mucous membrane seemed congested and was of a slate-grey colour. The intestines, liver, spleen, and pancreas were normal. The left kidney was normal. The right kidney was slightly enlarged; the capsule stripped off easily; the surface appeared normal; on section the cortex was seen to be slightly swollen; the surface was mottled pink and yellow, and the Malpighian bodies were prominent. The pleura was normal. Except that their anterior borders were emphysematous the lungs were healthy. The pericardium was normal and contained no fluid. The heart was normal in position; the ventricles were contracted; the left auricle was collapsed but the right auricle and the veins leading to it were distended. There was a normal quantity of fat on the surface of the heart. On section the heart substance was found to be healthy. The left ventricle and

left auricle were empty. On opening the right ventricle a fatty tumour was found growing from about the centre of the interventricular septum and passing upwards through the auriculo-ventricular opening which it completely blocked. The right auricle was distended with blood. All the valves of the heart were healthy. On careful examination no other fat was found in the interior of the heart. The veins of the brain were much distended; the membranes and brain substance were healthy; the cerebral ventricles were empty. The tumour in the heart was pyriform in shape, two inches in length, and weighed in the fresh state nine and a half grains.

I regret that I was unable to obtain the heart with the tumour *in situ*.

Dursley.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

BOLINGBROKE HOSPITAL, WANDSWORTH COMMON, S.W.

A CASE OF ENTERIC INTUSSUSCEPTION IN AN ADULT;
RESECTION; RECOVERY.

FOR the notes of the case we are indebted to Mr. Gerald S. Hughes, medical superintendent, who performed the successful operation.

The patient, a man, aged 23 years, was admitted into the Bolingbroke Hospital on April 23rd, 1905, when the following history was obtained. The patient had always been healthy. Four years previously he had had enteric fever. A year ago he had to take to his bed for a few days on account of pain in the right side of his abdomen, but the attack was relieved by purgative medicines. On April 21st (two days before admission) the patient woke in the morning with violent pain in his abdomen. He went to work, however, but after a few hours the pain became so severe that he had to return home and take to his bed. Vomiting occurred several times that day and continued at intervals till his admission to the hospital. The vomit was greenish and offensive but not faecal in character. On the 22nd (the day after he had been taken ill) he walked two miles to the station. This caused him very great pain which was continuous and "drawing" in character. His bowels were opened slightly on the morning of the 22nd and on this occasion there was a little blood in the motion.

On admission the patient was in a condition of collapse. His pulse was scarcely perceptible at the wrist and was 100. The temperature was 98° F. His expression was worried and anxious. The abdomen was flat, rigid, and did not move on respiration. There was tenderness on palpation all over the abdomen and especially near the umbilicus, where the pain was most severe. No tumour could be detected by external palpation, but per rectum a soft, tender swelling was felt on the right side of the pelvis. A quarter of a grain of morphia was administered to combat the shock and a laparotomy was performed without delay by Mr. G. S. Hughes.

An incision four inches long was made just to the right of the middle line below the umbilicus. On opening the peritoneal cavity a quantity of clear fluid escaped. The presenting intestines were injected and in some places plastic lymph was adherent to the gut. The appendix was examined and found to be healthy. On examining the pelvis a mass was discovered lying to the right side and this, on being drawn up, was found to be an intussusception of the small intestine. The intussusception was some six inches in length and was situated about 18 inches from the ileo-cæcal valve. The outer layer of bowel was dark blue in colour and the peritoneum was tightly stretched over the tumour. An attempt was made to reduce the invagination by continuous pressure, but this being of no avail it was decided to perform an enterectomy. The gut on the two

¹ Paget: "Lectures on Surgical Pathology," 1870, third edition, p. 447.