Plague : *Pasteurella pestis* isolated in pure culture (post mortem 4 hours after death). Septicæmia following suppurative lesion of the big toe, the patient having been treated with sulpha drugs : *Staphylococcus aureus* in pure culture (post mortem 2 hours after death).

Controls.

Acute anterior poliomyelitis : Culture sterile after 48 hours (post mortem 7 hours after death).

Diphtheria : Culture sterile after 48 hours (post mortem 2 hours after death).

A Mirror of Hospital Practice

ACUTE INTUSSUSCEPTION DUE TO AN INVERTED MECKEL'S DIVERTICULUM

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A GIRL, aged 12 years, was brought to the outpatient department on the morning of 3rd September, 1945, complaining of sudden abdominal pain, vomiting and constipation for the last two days. She was in acute pain, and was restless, her look was anxious and the abdomen was distended.

The patient gave a history of fever with rigors for six days. The fever came down every night with sweating. On the previous night she developed acute abdominal pain with vomiting; the vomitus did not contain blood or bile. The pain increased in intensity and radiated all over the abdomen, which became distended. She had not passed any fæces or flatus for two days. Her mother had noticed a lump to the right of the umbilicus.

On examination, the general condition of the patient was good, unlike what is usual in intussusception; pulse 160 with fair volume and tension; temperature 97°F. A sausage-shaped lump was prominent to the right of the umbilicus, with a concavity towards the umbilicus, and not moving on respiration. Waves of peristalsis were visible. On palpation, the lump was tender and hard, getting harder when a wave of peristalsis started. The lump could be moved to the left iliac region. No definite emptiness could be felt in the right iliac fossa. The lump was dull on percussion. Auscultation showed the presence of peristalsis. Examination per rectum showed no palpable mass and no blood on the examining finger. The spleen was palpable (two fingers). A diagnosis of intussusception was made. The blood slide showed benign tertian trophozoites in abundance and also gametocytes.

Immediate operation was decided upon. A soap and water enema was given and a few hard fæcal masses were passed; as a result of this, the lump was much reduced in size and shifted to the left iliac fossa; the abdominal distension and the pain became less, but tenderness was present. At noon the abdomen was opened under general anæsthesia by a right paramedial incision. A little fluid was present. A coil of small intestine looking dusky, blue and œdematous caught the eye; this was exteriorized, and the diagnosis of intussusception was confirmed. Attempts at reduction were made, but proved futile, as all the layers of the intussusception were glued together, and the whole mass was so œdematous and friable that resection of the mass was decided upon. The two cut ends of the gut were closed separately, and a lateral anastomosis performed. Sulphathiazole powder was dusted in the abdomen which was then sutured in two layers. On dissecting the specimen, an inverted Meckel's diverticulum was found.

The convalescence was uneventful; the wound healed by first intention and the clips were removed nine days after operation. The patient was given treatment for malaria. Her bowel function became normal and she was discharged a week later.

Comments.—According to Hamilton Bailey, Meckel's diverticulum is not an uncommon cause of intussusception at this unusual age. The absence of blood on rectal examination and the comparative absence of shock when compared with the common infantile form of intussusception are noteworthy features in this case.

My thanks are due to Major Charlewood, I.M.S., Civil Surgeon, Ajmer-Merwara, Ajmer, who performed the operation and gave me all facilities to follow up the case.

A TEAR IN THE WALL OF THE LARGE INTESTINE

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and
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OUR only excuse for publishing the following case is the unusual nature of the accident and the very unusual injuries produced by it. On looking through the literature of the past several years, we have not come across any case published of a similar nature. The type of accident is not a rare one, but the injuries produced as reported in the literature have usually been perforations of the large intestine. In this particular case, as the case record will show, even with such a severe injury as that produced by an electrical air-compressor there was no perforation in the intestinal track.

A patient, Y. M., male, aged 35 years, was admitted in Sir J. J. Hospital as an emergency case at 3-10 p.m. on 14th April, 1945. He gave the following history :—

He was working in a squatting posture near an air-compressor machine in a factory, and was not aware that the nozzle of the air hose was lying near him. Another workman in the factory accidentally turned on the switch of the air-compressor machine, and the end of the air hose immediately started wriggling about, and accidentally came near the anal orifice of this workman. Air got pumped into his rectum, and the force of the jet was so great that he was suddenly thrown on the ground—face downwards. He immediately lost consciousness but came round in a few minutes. During this time the other workmen around him were laughing, thinking the whole affair to be a practical joke. But the patient looked ill and was taken to the factory dispensary. The doctor in charge did not suspect any severe injury and asked the patient to wait. The patient however soon began to feel giddy and could not sit up. He was therefore immediately sent to Sir J. J. Hospital.

On examination.—The patient was cold and clammy, restless and in severe pain. The respiratory rate was 60 and the respirations were shallow and as if difficult. The pulse rate was 120, with good volume, and regular.

The abdomen did not move well with respiration and was held rather rigid. The abdomen was tender all over and tympanitic around the umbilicus. The abdomen was silent, the liver dullness was obliterated but there was no free fluid detected in the abdomen.

On admission a turpentine enema was given with a good result. Turpentine stupes were applied to the abdomen and a flatus tube was passed every two hours.

Half hourly pulse, temperature and respiration records were kept. By 8 p.m. the pulse rate had increased markedly, the abdomen was still very resistant and there was a suspicion of free fluid in the abdomen. The patient was advised an operation but he refused.

The pulse rate was steadily increasing, with low volume. The patient's general condition had deteriorated but he did not consent to an operation till 4 a.m., 15th April, 1945.

The operation was done under spinal anæsthesia 1.5 c.cm. of 5 per cent stovaine (M.&B.) at 4 a.m.

On opening the abdomen there was no escape of gas, but the peritoneal cavity appeared to be full of fresh blood. A large number of clots were removed, before the intestines could be examined. The whole length of the small intestine from the duodeno-jejunal flexure right up to the ileo-colic sphincter was found to be normal. On examining the large bowel, however, there was found one almost continuous tear in the line of the anterior longitudinal band through serous and both muscular coats, but leaving the mucous membrane intact. The tear was continuous from a point where the rectum became intra-peritoneal right up to the cæcum. The mucous membrane therefore appeared like one huge diverticulum. A flatus tube was passed up the rectum and the gas was allowed to escape. On each side of the line of the tear there were subserous hæmorrhages almost circular in shape, with a crenated margin. The average diameter of each patch was about $\frac{3}{4}$ of an inch. It was also noticed that from underneath the margins of the tear there was continuous oozing of blood. Suturing was started at the most distal end of the tear and was continued towards its proximal end. On reaching a point just short of the hepatic flexure, the patient suddenly collapsed. The abdomen was therefore closed in layers with a few through and through sutures.

During the operation the patient was given one pint of normal glucose saline and one pint of plasma. On returning to the wards the patient was kept on continuous oxygen inhalation, and coramine and strychnine 4 hourly.

Post-operative period.—For about six days following the operation the stomach had to be aspirated and washed with sodium bicarbonate solution, at least twice a day, as the patient would not tolerate continuous aspiration. The abdominal distension had also to be controlled with injections of prostigmine and the passage of a flatus tube.

The sutures were removed on the 12th day and the wound was found to have healed by primary intention. The patient was discharged on 3rd May, 18 days after the operation.

On 23rd May, about five weeks after the operation, the patient was examined. There was no apparent distension and no tenderness on palpation but the patient complained of vague abdominal pain and discomfort. This was relieved by a carminative mixture.

We are thankful to the Superintendent, Sir J. J. Group of Hospitals, for his kind permission to publish this case record.

TREATMENT OF HUMAN ANTHRAX WITH PENICILLIN

By S. AHMAD

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IN view of the few publications so far on this subject, the following case report may be of interest.

A sepoy, aged 22, was admitted on 28th March, 1945, to this hospital with acute gangrenous inflammation of the right ala of the nose and marked œdema of the adjoining portions of the face. Temperature was 103°, pulse 112, and the patient looked toxic and seriously ill. It appeared that local necrosis would need plastic repair later. A clinical diagnosis of anthrax was made, and confirmed by direct smear which showed morphological anthrax bacilli and staphylococci. The patient's shaving brushes were, however, found free of spores and the source of infection could not be traced.

In 1943 and 1944 I treated two cases of cutaneous anthrax in Iraq with sulphapyridine alone and with complete success.

In view of the severity of the case I decided to treat him with a combination of penicillin intramuscularly and sulphapyridine orally. In addition, penicillin solution, 500 units to 1 c.cm., was applied locally twice a day. The result was most satisfactory, both from point of view of control of toxæmia and of the local destruction of tissues. On discharge, the damage was found to be surprisingly limited and no plastic repair was necessary.

In view of the satisfactory results obtained with sulphapyridine, with penicillin, or with both, there would appear to be no indication now to employ the Sclavo serum, a treatment I found expensive, troublesome to the patient, and not so satisfactory as regards immediate response as well as the cosmetic result.

THREE CASES OF HÆMORRHAGIC SMALLPOX WITH RECOVERY

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'HÆMORRHAGIC smallpox is always fatal' (Price, 1933) ; this sentence indicates the grave nature of this type of the disease. During the last year (1944) and the beginning of this year, a total of six cases of smallpox was admitted in the local F. R. E. Hospital. The first three cases were treated with sulphonamides and parenteral liver extract as described in a previous publication (Sen Gupta, 1944) and as in the other cases of smallpox, and all of them died. In the course of treatment of these three patients, it appeared that these patients could not be given adequate amounts of alkalies and fluids by the mouth on account of severe toxæmia, vomiting and unconsciousness. It was then decided to administer alkalies and solutions of glucose intravenously in such cases. Sodium bicarbonate $7\frac{1}{2}$ per cent solution in 10 c.cm. doses intravenously was then added to the routine treatment with sulphonamides. The next three cases of hæmorrhagic smallpox were treated with this modified regime, *i.e.* intravenous sodium bicarbonate plus sulphonamides, and all of them made a more or less rapid recovery. The full clinical notes of these cases are presented below :

Case 1.—A Hindu male, aged 20 years, unvaccinated, was admitted on 30th March, 1944, on the third day of illness with hyperpyrexia and unconsciousness, with furious delirium at times. There was a dark purpuric rash over the forehead, arms and the thighs; the eyes were bloodshot with sub-conjunctival hæmorrhage. He was put on the following treatment—glucose 25 per cent solution 25 c.cm. intravenously twice a day, urea