liked this agent. But this may be prejudice. Whatever anaesthetic be employed, safety must be the first consideration. Death should never occur in so simple a proceeding, and has always been due to the anaesthetic. Chloroform, either pure or in mixture, has been the cause. It is surely an excuse to talk of the status lymphaticus.

My object in this note is to emphasize the safety of ether for general use in removal of tonsils and adenoids. It became necessary in the out-patient department at Guy's Hospital as early as 1890, when these operations became numerous, to devise a rapid and safe method of producing anaesthesia, and one followed by quick recovery. Ether given by Clover's inhaler we found fulfilled all these conditions, and during thirty years I have—except when in private a special anaesthetist has insisted on some modification—employed no other method. To this, and this alone, I must attribute the absence of any fatality. There were some 300 operations each year at Guy's, and, adding cases in private, the number might safely be set down as between 4,000 and 5,000. Let me add that in private in the early days the anaesthetic was nearly always given by the medical man, who very rarely knew anything about ether. I never went to a case without ether and a Clover's inhaler, and generally put the patient under myself, leaving the doctor to carry on while completing my preparations.

Though I have been constantly operating during the war and supervising others, and therefore attending many operations, I question whether any anaesthetic can compete with ether for short operations, or Clover's inhaler as a means of administration where gas and oxygen are not available. The open method has, of course, replaced all others for long operations. There are some little tricks no doubt connected with the successful use of a Clover, and if you will give me space some day I will describe how a child or adult can be put under without a struggle, and without any feeling of suffocation, in four minutes.

Gas given before ether in throat operations is distinctly harmful; it produces much congestion and mucus, and prolongs the whole operation. Ether given by Clover's apparatus will, after four minutes, give an equal period of complete anaesthesia without abolishing the reflexes.

Let me in conclusion confirm the great importance of Mr. Bowen's test of safety when ethyl chloride is used, and I would also add chloroform—not to begin until there is a pharyngeal reflex. In my early operations on tongue cases I noticed that the breathing sometimes ceased when the tongue was drawn forward; I therefore waited until some resistance to the opening of the mouth returned. Then only is it safe to insert the gag, and the same applies to all mouth and throat operations.

CUTANEOUS ANTHRAX.

BY

ERNEST F. NEVE, M.D., F.R.C.S. EDIN.,

SURGEON TO THE KASHMIR MISSION HOSPITAL.

ANTHRAX is extremely common in Kashmir among cattle. Every few years an epidemic sweeps through the valley, carrying off thousands. It is discreditable to the administration that the prophylactic serum, which is procurable at the Imperial Bacteriological Laboratory, Muktesar, has not yet been brought into use.

Since 1900 seventy-five cases of "malignant pustule" have been treated in this hospital. The disease is becoming more frequent, for during the past three years twenty-five patients, or one-third of the whole, were admitted. All were males and between the ages of 14 and 57. I have never seen "malignant pustule" in a female. No doubt in some instances the disease was contracted while skinning sheep and cattle dead from anthrax. So far as I know, the hides of these animals are exported without any kind of warning or precaution. Flies do not, I think, play an important part in the transmission of cutaneous anthrax. It is quite as common in midwinter when there is hard frost as in the summer.

Of the cases 40 per cent. were affected in the upper extremity, 32 per cent. on the head, neck or face, 12 per cent. on the back, and the rest on the abdomen, chest, or lower extremity.

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Cutaneous anthrax is a better name than "malignant pustule." The appearance is characteristic. The lesion is like a very large and acutely inflamed vaccination vesicle, with depressed dry dark brown centre and raised circumference with vesicular edge. The skin around is red, and there is inflammatory oedema. There may be satellite vesicles. These blisters contain serum, and the bacillus can easily be demonstrated. In some cases the lesion is of considerable size. I have seen one five inches across, and another with a diameter of four inches. The lesions may be multiple. One patient had six separate infected areas, another five. In a third the forearm and the head and neck were involved. A fourth case had five lesions on the abdomen. Another, a man who worked among sheep, and who had an abscess in the iliac region, got infection of the wound. The constitutional symptoms vary much. In cases brought late there may be profound toxæmia, with circulatory depression, high temperature, running pulse, albuminous urine, and other signs of visceral infection. One patient died the evening of admission. Four others died within forty-eight hours. In these late cases in which systemic infection has occurred, no treatment avails. In Kashmir the cases occur among villagers, farmers, shepherds, etc. I have not met with a single case of pulmonary infection.

The treatment we adopt is very thorough cauterization with a red-hot button cautery. Excision and incisions, recommended by some textbooks, I regard as almost equally dangerous, tending as they do to open up fresh planes of communication, and thereby promote systemic infection. The natural local reaction to the pathogenic irritant is very strong. There is most vigorous leucocytosis. As a rule the blood is not infected. The cautery, while destroying the virus, also increases the local reaction. Clinically, our records point to this as the most satisfactory method of local treatment. Solvay's serum has been recommended. But most of these cases, when they come under treatment, must have already produced their own antitoxins; those who have not and are almost or quite moribund are hopeless. Seven cases of our series of seventy-five died, giving a mortality of 9.3 per cent.

RUPTURE OF LARGE INTESTINE: OPERATION: DEATH.

BY CAPTAIN E. HUNTLEY, R.A.M.C.,

SURGICAL SPECIALIST TO THE MILITARY HOSPITAL, FARGO, SALISBURY PLAIN.

I WAS under the impression that without ulceration, associated with recent or old disease or with the presence of new growth, rupture from straining at stool could not occur. In the following case, however, a man, straining badly, ruptured his bowel at a site where neither enteric nor dysenteric ulcers are commonly found.

Captain —, aged 34, was admitted to hospital on May 26th, 1919, suffering from intense abdominal pain. The history he gave was that he had always been very constipated. He had served nine years in India, but had never had typhoid or dysentery. He had had attacks of malaria, the last five or six years ago, but up to the afternoon of the day of admission he had enjoyed excellent health, being, as he expressed it, "as strong as a lion." About 4 p.m. on the day of admission he went to the latrine, and while straining very hard, felt "something give way," and a sudden pain in the splenic region of his abdomen. He had felt sick, but up to the time of admission, about 6 p.m., had not vomited; he had passed flatus. He was in a somewhat collapsed condition, cold and clammy. Temperature 97° F., pulse 88. The abdomen was distended, but not markedly. There was general tenderness all over, but mostly under the left costal margin, and here there was more rigidity than elsewhere. Liver dullness was absent. Whilst examining him he vomited. There was nothing characteristic in the vomit. Examination by the rectum revealed nothing abnormal; no faeces could be felt. An attempt to give an enema caused him such intense pain that it was given up.

Captain J. R. Caldwell, R.A.M.C., very kindly saw the patient with me, and it was decided to operate at once. An abdominal incision was made in the middle line above the umbilicus, and later extended both upwards and downwards. As soon as the peritoneum was opened there was an escape of turbid fluid with flaky material. Large quantities of fluid were found in both flanks, with portions of floating vegetable matter. After diligent searching, nothing in the nature of a rupture was found until the abdominal incision was extended downwards well below the umbilicus, when a rent in the large bowel about the junction of the sigmoid and rectum was visible. This rent

was quite without any induration about its edges, and had all the appearance of being of recent origin; it was about an inch in diameter. It was closed by a purse-string suture. The abdominal cavity was then sponged as dry as possible, a large quantity of liquid and solid faeculent matter being mopped out of the pelvis and two drainage tubes inserted. The patient became very collapsed and pulseless towards the end of the operation. He was put back to bed and the usual methods adopted to try and overcome the shock. He passed a very restless night, with continual vomiting of darkish brown fluid. He died about 3 p.m. next day, never having got over the shock of the operation.

Post-mortem examination of the bowel was made by Captain Caldwell, in the presence of Colonel Sir A. W. Mayo-Robson. No ulceration or disease of any kind could be made out. The rent was on the free side of the bowel, and the suture had completely closed it, rendering it water-tight.

The portion of the bowel affected was sent, at Colonel Mayo-Robson's suggestion, to Professor S. G. Shattock, pathologist to the Royal College of Surgeons, for examination. The report received states that there is no evidence of either ulceration or new growth nor of any diverticulum. Thus no cause to explain the rupture can be assigned.

I desire to express my thanks to Lieut.-Colonel A. R. Henchley, D.S.O., R.A.M.C.(T.), for his permission to publish notes of this case.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

ASPIRIN IDIOSYNCRASY.

THE following case of aspirin idiosyncrasy is of interest, after Dr. Karunaratne's case and the subsequent correspondence on the subject:

On August 22nd a man, aged 34, awoke with a severe attack of neuralgia, and at 9.15 a.m. took 10 grains of aspirin. An hour later he noticed that his eyelids and lips were beginning to swell. This was rapidly followed by difficulty in swallowing and in breathing through the nose. A rash then appeared all over the body. I saw him at 11.15 a.m., and he then had marked oedema of the eyelids, lips, and gums, and running at the nose and eyes. The arms, chest, and abdomen were covered with an urticarial rash. The pulse was 80 and the temperature normal. Two hours later the symptoms began to subside, and when seen at 5.30 p.m. the same day there was only slight oedema of the eyelids and upper lip; the pulse was 72 and the temperature normal. He could swallow without difficulty and breathe easily through the nose. He had a similar attack in November, 1918, after taking 5 grains of aspirin. On that occasion the symptoms started three and a half hours afterwards, and the attack lasted for twenty-four hours. At that time he was told that he had influenza. In April, 1918, he had an operation for mastoid disease, and since has taken aspirin only on the two occasions mentioned, and each time the same symptoms occurred. Before the mastoid operation he had taken aspirin several times without any untoward symptoms. Since the operation he has had a bad attack of neurasthenia, which lasted until three months ago.

He has been subject to nasal catarrh, but has not had nasal polypi, enlarged tonsils, or asthma.

Shanklin, I. W.

R. F. BOLT.

TRENCH FOOT LEADING TO GANGRENE.

SOWAR G. S., 12th Cavalry, was admitted to No. 1 Indian General Hospital, Karachi, on February 13th, 1919.

History.—The patient stated that he was exposed to damp and cold in the trenches in Mesopotamia for several days in the winter of 1918. He was admitted to No. 20 Casualty Clearing Station on December 8th, 1918, for swelling and oedema over both feet and the lower part of the legs, with severe pain, blisters, and marked discoloration of the skin over the affected parts. Later on the distal parts of the right foot shrivelled and turned black, ulceration and sloughing set in, and amputation was performed through the metatarso-phalangeal joints on January 8th, 1919. In the left foot an abscess formed below the internal malleolus which burst and continued discharging for some time. He had an irregular temperature throughout.

On admission a boggy swelling with oedema was present on both feet and the lower two-thirds of both legs

with slight greyish discoloration of the skin. He was unable to walk, and movements of both feet were very limited and painful. The operated stump of the right foot was discharging through several small sinuses. The probe could go about half an inch up, striking bare bone. There was no sinus in the left foot. The general health was very weak, and he was emaciated and anaemic. He was put on tonics, and a eusol bath was given to the right foot morning and evening. The wound has healed; the oedema is less, but the boggy swelling is about the same. The general health slightly improved. The x-ray report is as follows:

Right Foot.—All the metatarsal bones are necrosed; the shaft of each appears to form one large sequestrum, which is gradually becoming reduced in size and density and is surrounded by a growth of new bones.

Left Foot.—Irregularity of shaft of second and third metatarsal bones.

Right Leg.—Necrosis of lower end of fibula, the whole of the lower third of tibia appears to be a large sequestrum round which new bone is forming.

Left Leg.—Necrosis of lower end of fibula. The whole of lower third and part of mid-thirds of tibia appears to be one large sequestrum which is surrounded by growth of new bone.

The presence of a large number of septic sequestra presumably lying in a box of new bone formation is the unusual and interesting feature of the case. There are absolutely no signs of any abscess formation. I must thank Lieut.-Colonel R. W. Anthony, I.M.S., Officer Commanding No. 1 Indian General Hospital, and Major L. P. Stephens, I.M.S., Surgeon Specialist Karachi Brigade, for permission to send these notes for publication.

K. N. GOYAL, Captain I.M.S.(T.O.),

Karachi.

No. 1 Indian General Hospital.

Reports of Societies.

TRENCH FEVER.

At a meeting of the Section of Epidemiology and State Medicine of the Royal Society of Medicine on October 24th, the President, Dr. E. W. GOODALL, in the chair, Major W. BYAM, R.A.M.C., read a paper on trench fever: its epidemiology and endemology. He defined trench fever as a blood infection communicable from man to man by means of the louse, characterized by recurrent pyrexia, headache, giddiness, pain in the lumbar region and limbs often of considerable severity, conjunctival congestion, sweating, moderate leucocytosis at the height of the fever, and slight enlargement of the spleen.

The habits of the louse were described, and an account was given of some experiments tending to show that lice migrated more readily from the person of a febrile man to that of his neighbour than when the original host was normal. The experimental work of the Trench Fever Committee was summarized, and that of other observers, leading to the following amongst other conclusions:

1. Lice fed on trench-fever patients may be infective in from five to eight days from the first feed.
2. Such lice are certainly still infective up to the twenty-third day.
3. The excreta of such lice are infective.
4. The presence of *Rickettsia* bodies in the excreta of lice is highly correlated with the infectivity of such excreta.
5. As little as 0.1 mg. of infective excreta injected subcutaneously may produce the disease.
6. Lice can become infective on an afebrile patient.
7. The blood may still be infective so late as the 443rd day of the disease.
8. Infection probably does not occur by the mouth or by inhalation.

In the ensuing discussion, to which Dr. BUCHANAN, Dr. ARKWRIGHT, Mr. BACOT, Dr. BROWNLEE, Dr. CARMALT-JONES, Dr. CHALMERS, and Dr. BUTLER contributed, there was some difference of opinion as to the cogency of the experiments purporting to show that lice migrated more readily from a febrile patient. The probability of the disease becoming widespread in civilian life was debated, the general opinion being that this was unlikely. Attention was drawn to the value of hyperaesthetic skin areas in the differential diagnosis.