A case of plague in Tansen

We keep reminding our younger medical staff that common things are common and should be thought of first. From time to time we need to remind ourselves that uncommon things do occur and also that if one does not think of a particular diagnosis that it will not be made.

Recently a twenty-three year old young man from a village near Tansen, Palpa was admitted to the United Mission to Nepal hospital with a presumptive diagnosis of strangulated left femoral hernia.

His symptoms had begun three days earlier with left sided abdominal pain, anorexia, and failure to pass gas or stool. Within a few hours a lump in the femoral triangle appeared and gradually enlarged.

Upon admission he seemed quite sick, i.e. toxic, with rapid pulse, rapid respirations, normal blood pressure, not confused but not alert. Temperature was 38.5°. Chest auscultation showed coarsened breath tones without wheeze or crepitation. He was mildly distended, quite tender in the left iliac facia, did not have rebound tenderness, and had rare bowel tones.

There was a 5 cm. rounded very tender mass in the left femoral triangle which was not fixed to the skin. Its borders were not clearly defined.

Chest X-ray showed increased parenchymal density and a finely stippled infiltrate somewhat like miliary tuberculosis.

Haemoglobin was normal. The total white count was 13,600.

Abdominal upright X-ray revealed a gas filled colon but little gas in the small gut.

A presumptive diagnosis of strangulated sigmoid colon in a left femoral hernia was made. Eighty mg of gentamicin and 500 mg of metronidazole were given intravenously. Early septic shock due to gangrenoid necrosis was assumed. A laparotomy was carried out. During the preparation the anesthetist noted traces of blood in the pharynx and on the vocal cords. Traumatic naso-gastric intubation was initially blamed for this.

Abdominal exploration was through a midline hypo gastric incision. 500 ml of blackish serous fluid was aspirated. There was no hernia. The left iliac fossa and paraspinous gutter was very full with swollen retroperitoneal tissues. The overlying peritoneum was slightly ecchymotic. Suspecting psoas abscess or abscess of iliac nodes, needle aspiration was done. No pus was found. The appendix was normal. The peri-rectal tissues were oedematous and green tinged.

Manual exploration of the abdomen revealed a slightly enlarged, firmer than normal, but quite discreet pancreas. There were no other changes noted.

A diagnosis of septicemia was given. The abdomen was closed.

In the recovery room the patient had cardiac arrest before endotracheal extubation. CPR restored cardiac activity within one minute. However, the patient's condition continued to deteriorate. He was given Haemaccel, electrolyte solutions and whole blood. Despite this, his heart rate increased, his blood pressure dropped and he died at 8:00 p.m. 6 hours after having come to our emergency department.

Due to suspicions raised by reading that night, examination of nasal smear, cardiac aspirate (cultured), and inguinal aspirate were done the following morning before the family took the body away. Unfortunately post mortem examination was not requested though in all likelihood the family would have refused.

Smears from groin and heart showed no bacteria.

Nasal smears stained with both Gram's technique and Wright's showed many bacteria. Of specific interest however were Gram negative bipolar staining rods. On Wright's stain these were seen as very deeply staining bipolar "safety pin" rods some of which were encapsulated. At 72 hours there was no growth on culture. We assume that this failure of growth was due to the pre-operative dosage of metronidazole and gentamicin.

A diagnosis of Bubonic-pneumonia plague was agreed upon.

We informed the District Health Officer. We tried to locate all ward patients, friends, and hospital personal who might have had contact with the patient. Each was provided with a five day supply of Doxycycline and a verbal warning. A few people from the family received prophylaxis but not the entire village. Sixty five hospital staff received prophylaxis.

The family, being poor, contrary to our expectation of customary cremation, buried the body in a very shallow grave covered with stones. Because of the risk of microbe transfer by predators they were requested to increase the depth of interment.

No further cases have come to our notice.

Every detail of this case fits the clinical picture of Plague described in Harrison's Principles of Internal Medicine (McGraw, 1987 pp 615-617). Plague has been seen from time to time in Nepal and India. Nepalese farmers are constantly exposed to the various rodents of the fields and forests that are the world-wide plague reservoir.

During the past 75 years there have been many isolated cases of plague but no reported epidemics. Huge epidemics have occurred in the past. It therefore is appropriate to remember that this dangerous disease is lurking in fields and forests.

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