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MELIOIDOSIS IN A DIABETIC

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IN REPORTING a case which had reached hospital in England, Maegraith and Leithhead (1964) mentioned the value to others of writing up this little-known disease when it is met. Burma and Malaya have been the main source of recently recorded cases (Peck and Zwanenberg, 1947; Paton, Peck and Van de Schaef, 1947; Harries, Lewis, Waring and Dowling, 1948; Green and Mankikar, 1949; Khaira, Young and Hart, 1959). The association of lung abscesses with the pyaemia in ours as well as other cases favours the suggestion of Khaira and others (1959) that the portal of entry may be respiratory; and, in the case of the officer serving in North Borneo described by Baird and Meers (1965), Whitmore's bacillus (*Pseudomonas pseudomallei*) was recovered from the sputum.

Case Report

Patient 036030 was a 52-year-old native of Goa, employed as a ship's pantryman, with a history of typhoid fever five years before, cystotomy for stone in the urinary bladder one year before, and diabetes for five years, for which he had ceased taking tablets one year before. He complained that his urine was red and that for two weeks he had had pain in the left loin, which had become swollen, hot and tender in the last three days. Temperature 102°F, pulse 120, BP 115/60 mm. Hg.; spleen just palpable; there were signs of subcutaneous abscess formation along the left tenth and eleventh ribs to the angle of the scapula. Pus was drained by incision two days after admission and chloramphenicol treatment begun. Another subcutaneous abscess appeared in the right groin, and was also incised. The temperature oscillated for the next few days

in a near-normal range, then began to rise and remained above 101°F till the patient's death on the sixteenth day after admission.

Investigations. Urinary glucose on admission was 1% but no ketosis was found. Soluble insulin, 20 units b.d., was given when the fasting blood sugar was reported as 248 mg./100 ml. on the tenth day after admission. Blood findings were: ESR 46 mm./hr., an absence of anaemia (PCV 44%) and an initially low white cell level of 3,500/cu. mm., which rose to 6,800 one week later and fell to 4,200 on the day of death. Complement fixation tests for syphilis and amoebiasis were negative. The urine contained pus and bile and grew *Aerobacter*. Serum bilirubin 3.5 mg./ml., thymol turbidity 10 units, serum colloidal gold flocculation 221000 and serum alkaline phosphatase 27 K.A. units. Serum sodium 117 mEq/l, total protein 6.4, γ-globulin 2.6 g./100 ml. The sputum yielded a heavy growth of *Candida*. The faeces contained a few ova of *Trichuris*. Agglutination tests with *Salmonella*, *Proteus* OX and *Brucella* were negative.

Bacteriology. The pus obtained on incising the subcutaneous abscess in the left loin, the blood culture taken two days before death and the pus obtained post-mortem from the left subdiaphragmatic abscess all gave a growth of Whitmore's bacillus. It was a motile, irregularly staining, gram-negative bacillus, with a tendency to form parallel bundles. It fermented glucose without gas, liquefied gelatin after three days, gave a soft clot in milk, reduced nitrate, formed a pellicle, grew on MacConkey's medium, showed very slight yellow pigmentation on nutrient agar, was not haemolytic on horse-blood agar and gave negative Voges-Proskauer, methyl red, indol, urea-splitting and citrate-utilization tests. The organism was agglutinated by the patient's serum diluted 1 in 60 but not by a control normal serum diluted 1 in 30. A guinea-pig, intraperitoneally

injected with 0.2 ml. of 24 hr. culture, was moribund after 24 hours: the testes were slightly swollen, gram-negative rods were demonstrated in the spleen and Whitmore's bacillus was cultivated from the blood. The laboratory of the London School of Hygiene and Tropical Medicine (by courtesy of Dr. Paul Chadwick) kindly confirmed the identification. The antibiotic sensitivities are recorded in the following table:—

Antibiotic incorporated in blood agar medium	Growth of Whitmore's bacillus aerobically after 24 hr. incubation at 37°
Penicillin 1 unit/ml.	+
Penicillin 10 units/ml.	+
Chloramphenicol 10 µg./ml.	0
Novobiocin 10 µg./ml.	0
Streptomycin 3 µg./ml.	+
Streptomycin 20 µg./ml.	+
Sulphathiazole 100 mg.%	0
Vancomycin 10 µg./ml.	+
Oxytetracycline 2 µg./ml.	+
Oxytetracycline 20 µg./ml.	+
Erythromycin 2 µg./ml.	+
Erythromycin 10 µg./ml.	+
Neomycin 10 µg./ml.	±

Necropsy. The body was that of a rather thin Indian with greying hair, scars over shins, old surgical suprapubic scar, recent 2 cm. incision below right Poupart's ligament, and other 2 cm. long, in left loin over last rib. Beneath the latter was a healing subcutaneous abscess without deep connections, but overlying a haemorrhagic area in muscle. A similar haemorrhagic area was found in the fascia beneath the pectoral muscle near the right axilla. The region round the spleen showed many pockets of pus loculated by fibrous tissue. A few drachms of greenish pus were present at the splenic hilum and the neighbouring tail of pancreas showed some fibrosis. Adhesions to the splenic flexure of the colon and the greater curve of the stomach formed, with the left dome of the diaphragm, the boundaries of a burrowing type of abscess. Pus was recovered from behind the left suprarenal, from beside the coeliac axis and from an area just in front of and below the cardia. At the centre of this septic area, the

enlarged spleen (685 g.) was converted into a tough walled sac containing semi-diffuent pink pulp. The splenic vein was clean and patent. No abscesses were seen in the enlarged fatty liver (2,305 g.). Fairly numerous pyaemic abscesses, up to 1 cm. diam., with haemorrhagic borders, were present in both kidneys (left 255 g., right 125 g.). The suprarenals were normal and there was no connection between the left kidney and the abscess in the left hypochondrium. The abscess did not penetrate the left dome of the diaphragm, but organizing fibrinous exudate, with a little turbid fluid, was present at the base of the left lung. Both lungs showed oedema and congestion and contained numerous small pyaemic abscesses. An area (2.5 cm. diam.) of reactivated fibro-caseous tuberculosis was found at the left apex. An old fibrosed myocardial infarct was present in the posterior wall of the left ventricle of the heart (320 g.). Section of the spleen showed simple perisplenic abscess formation.

The case was under the care of Mr. Stephen Power, M.S., and Dr. Ronald Hartley, M.R.C.P., to whom my thanks are due.

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HAEMATOMA OF CHEST WALL DUE TO COUGHING

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FRACTURE of ribs (Jones, 1907; Palfrey, 1924; Watson-Jones, 1955) and tear in inferior (deep) epigastric vessels resulting in a haematoma of the abdominal wall (Bowles, 1939; Murray and Burger, 1954; Mackenzie and Macbeth, 1964; Rains and Capper, 1965; Stiles, Raskowski and Henry, 1965) have been described as the compli-

cations of violent coughing. Sudden muscular strain has also been responsible for the subcutaneous rupture of the rectus abdominis muscle (Illingworth and Dick, 1963). The development of haematoma of the chest wall due to coughing has not yet been mentioned in the literature.

Case Report

D.C., aged 55 years, was admitted to East Birmingham Hospital on 13th October, 1964 with cough and shortness of breath. For the past

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