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References


Scrotal Gangrene in Asymptomatic Myeloma

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Idiopathic scrotal gangrene, or Fournier's gangrene (Fournier, 1884), is an uncommon condition of obscure aetiology. The present case arose apparently as a complication of myeloma—a disease in which there is increased susceptibility to infection.

Case Report

A 71-year-old bakery worker developed an influenza-like illness with pyrexia, anorexia, diarrhoea, and general malaise for two days. On the second day he had a fall, and over the next three hours his scrotum became swollen, discoloured, and increasingly painful. He vomited several times throughout the evening and was admitted to hospital next morning.

He had a long history of chronic bronchitis with productive cough, and smoked 20 cigarettes a day. Prostatetomy had been performed in 1968.

On examination he was severely dehydrated, pale, and toxic. His temperature was 37.5°C. The scrotum was grossly swollen and tender in the lower two-thirds and the skin was purple and gangrenous. The testes could not be palpated. Heart rate was 120/min, with moderate pulse volume, and he was tachyypnoeic. Breath sounds were vesicular, with high-pitched inspiratory and expiratory component and clear lung areas. The liver was just palpable below the right costal margin.

Haemoglobin was 11.5 g/100 ml, packed cell volume 35%, mean corpuscular haemoglobin concentration 33%, white cell count 3,200/mm³ (85% neutrophils). No glycosuria or proteinuria was present, and a midstream specimen of urine was sterile on culture. Serum electrolytes were normal but blood urea was 66 mg/100 ml. Chest x-ray examination showed only the changes of chronic bronchitis.

The patient was catheterised and rehydrated with intravenous fluids, and treatment was started with kanamycin 500 mg twice daily and benzylpenicillin 1 megaunit four times daily.

At operation the scrotum was opened above the gangrenous skin, which was excised completely. Both testes were viable and bilateral symmetric hydroceles were present. The left testis was removed to allow the remaining scrotal skin to be brought over the right testis and closed in the midline.

Histological examination of the scrotal wall showed heavy bacterial infiltration of the necrotic skin consistent with the diagnosis of Fournier's gangrene. Coliform organisms, β-haemolytic streptococci, and Staphylococcus pyogenes were cultured from scrotal swabs.

There were no postoperative complications except that the wound was slow to heal, two areas of slough persisting for over three weeks.

A white cell count repeated the day after admission was noted to have fallen to 1,400/mm³ (72% neutrophils); E.S.R. was 144 mm/in one hour. Haemoglobin was 9.4 g/100 ml and the anaemia was normochromic and normocytic. Total serum proteins were 7.3 g/100 ml, with a definite band in the β-globulin range, which was markedly raised at 37.3 (normal 7.1-3) mg/100 ml. Serum albumin was reduced.

Sternal marrow examination showed infiltration by atypical plasma cells consistent with a diagnosis of myeloma. Cold agglutinins were present in the blood but no cryoglobulins were detected. Hence Jones protein was present in urine. The myeloma proteins were of the IgA type. Coagulation studies, serum folate and vitamin B₁₂ liver function tests, serum uric acid, calcium and phosphate, creatinine clearance, and skeletal survey were all normal.

A course of melphalan in combination with prednisone was begun once the scrotal wall had healed.

Comment

It is the exception rather than the rule for an underlying cause to be found in a case of Fournier's gangrene. Thomas (1956) reported that the condition was secondary to minor abrasions, balanitis, or chancreid in about one-third of cases, and it has been noted to occur after minor surgical procedures in this area, such as herniorrhaphy, incision of perirectal abscess, and injection of a hydrocele. It has been described after vasectomy (Pryor, Yates-Bell, and Packam, 1971). The possibility of trauma to the scrotum in this case as an aetiological factor may be considered, but it is debatable whether this precipitated the condition or merely drew the patient's attention to it.

The finding of myeloma suggests that the underlying disease may have contributed to the onset of this opportunistic infection. In addition, it was noted during cross-matching that he had a high titre of cold haemagglutinins in his serum. In such patients cyanoysis of the digits and other parts may develop on exposure to cold, and gangrene may supervene (Marshall, Shepherd, and Thompson, 1953).

Despite the uncertain aetiology of idiopathic scrotal gangrene, the finding of a plasma cell dyscrasia with its concurrent diminished resistance to infection in the presence of cold agglutinins suggests possible aetiologcal factors in this case.

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