On-line Case Report

Breast gangrene in an HIV-positive patient

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ABSTRACT

Introduction Breast gangrene has been reported as a complication following puerperal sepsis, breast surgery, nipple piercings, warfarin toxicity, etc. We report a case of primary breast gangrene in an HIV-positive individual which, to the best of our knowledge, is the first of its kind.

Case report A 40-year-old previously healthy woman presented with fulminating left breast gangrene. She was detected to be HIV positive. Mastectomy was performed. The detailed management of the condition is discussed.

Conclusion Severe necrotising infections may be initial manifestations of HIV infection and patients with such infections should be screened for HIV.

Keywords: Breast gangrene – HIV – Screening

A case of breast gangrene in an HIV-positive woman is reported. To the best of our knowledge, this is the first report of its kind in the English literature.

Case report

A 40-year-old menopausal woman with no significant comorbid medical illnesses presented to our emergency services with progressive swelling of the left breast of 1-week duration, high grade fever and foul-smelling discharge from the wound overlying the left breast for 2–3 days. She had no history of trauma to the breast.

Examination showed a febrile, poorly nourished woman, weighing only 30 kg. Her pulse was 120/min and blood pressure was 90/50. She was extremely dehydrated.

Local examination revealed complete dermal gangrene of the left breast with foul-smelling purulent discharge (Fig. 1). The infection was spreading into the intermammary space.

Investigations showed a haemoglobin of 6.6 g%, BUN 77 mg% and creatinine of 4.7 mg%. Her blood sugar and

serum electrolytes were normal. In view of the unusual nature and severity of the infection, an HIV ELISA was performed which showed her to be HIV positive.

After initial resuscitation and blood transfusion, she was subjected to surgical debridement. Intra-operative findings revealed that all the left breast tissue along with the overlying skin and the underlying pectoral fascia was gangrenous. The pectoral muscles, however, appeared healthy. There were pus pockets extending into the axilla and intermammary region which were also adequately drained. The end result, therefore, resembled a mastectomy.

Her postoperative course was uneventful. Smears of the pus showed Gram-positive cocci in clusters and culture grew polymicrobial flora. She was given intravenous Imipenem-Cilastatin. However, in spite of adequate hydration she remained haemodynamically unstable and dopamine at 10 µg/kg/min was started. Her renal parameters showed progressive improvement and returned to normal by postoperative day 8. Daily dressings of the wound were done.

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Figure 1 Pre-operative photograph of the patient showing gangrene of the left breast.

Her CD4 count was 156 cells/mm³ and anti-retroviral therapy was introduced. Subsequently, she made an uneventful recovery from the necrotising infection.

Discussion

Breast gangrene is a severe, necrotising, bacterial infection of breast tissue. In the past, it has been reported as a complication following puerperal sepsis,¹ nipple piercings for body decoration,² warfarin toxicity,¹ and surgery of the breast.³ Necrotising fasciitis of the breast has also been reported as a complication of injection of methylene blue dye for sentinel lymph node biopsy.⁴

The treatment for breast gangrene remains adequate resuscitation followed by aggressive debridement and broad-spectrum antibiotics. Daily dressings are to be performed. Subsequently, skin cover is given and, in cases of substantial tissue loss, breast reconstruction is performed.

Breast gangrene in an AIDS patient can occur in the absence of any noticeable trauma or antecedent insult to the breast due to the poor immune status of these individuals.

Severe necrotising bacterial infections are common among HIV-positive individuals and are classified as Stage III in the World Health Organization Disease Staging System

for HIV.⁵ They sometimes occur as the initial manifestation of HIV infection in a previously healthy individual, as was seen in this case. Therefore, in patients presenting with such severe bacterial infections, screening for HIV should be routinely considered.⁶ Other immunodeficient states like diabetes mellitus, steroid use and congenital immunodeficiencies must also be ruled out.

Severe bacterial infections indicate the progression of AIDS and require initiation of anti-retroviral therapy.

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