Lesson of the Week

Perianal abscess: "Have I excluded leukaemia?"

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Perianal abscess is a common surgical emergency. I describe two patients in whom perianal abscess was the presenting feature of acute myeloblastic leukaemia. The diagnosis of leukaemia was made initially from histological examination of the excised perianal tissue. These cases emphasise the importance of a preoperative diagnosis of leukaemia and the need to request a full blood and differential white cell count.

Case reports

Case 1—A 46 year old woman presented as an emergency with a small, apparently classic perianal abscess. She was otherwise healthy, and examination showed no additional abnormality apart from a temperature of 37.2°C. The abscess was excised uneventfully under general anaesthesia. Histological examination of the perianal tissue showed a dense subcutaneous cellular infiltrate that included mature neutrophils and at least 40% blast cells. The infiltrate was positive for naphthyl AS-D chloroacetate esterase, indicating myeloblastic leukaemia. Culture of the tissue showed a heavy growth of *Staphylococcus pyogenes*. The blood count on admission had shown a haemoglobin concentration of 10.7 g/dl, and further haematological investigations were performed because of the histological findings. The peripheral white cell count was $36 \times 10^9/l$ with 93% blast cells, and the platelet count $102 \times 10^9/l$. A bone marrow aspirate confirmed the diagnosis of acute myeloblastic leukaemia (M2), and successful remission was achieved with chemotherapy.

Case 2—A 62 year old man presented as an emergency with an apparently classic perianal abscess. He had a history of mild hypertension treated by a β blocker. Examination showed normal results with a supine blood pressure of 130/70 mm Hg and a temperature of 36.4°C. A chest x ray film and electrocardiogram were normal. The haemoglobin concentration was 11.2 g/dl, and no other emergency haematological investigations seemed necessary. The abscess was excised uneventfully under general anaesthesia. Five hours after the operation he became feverish and hypotensive. Despite immediate administration of intravenous fluids and antibiotics, he had a cardiac arrest; resuscitation was unsuccessful. Before necropsy the excised perianal tissue was examined histologically. As in case one the cellular infiltrate included a mixture of mature neutrophils and myeloblasts indicating myeloblastic leukaemia. Necropsy showed pulmonary oedema, severe triple vessel coronary artery atheroma, and mild left ventricular hypertrophy. The spleen and liver were not enlarged, but the marrow was hypercellular. Histological examination confirmed acute myeloblastic leukaemia (M2) with extensive organ infiltration. *Escherichia coli* was cultured from the original excised perianal tissue and the spleen at necropsy. Death was recorded as due to septicaemia. Postmortem blood tests were unsatisfactory.

Discussion

Oropharyngeal infection is a well recognised but rare presentation of leukaemia. In addition, lung and skin are common sites

A full blood count and differential white cell count should be performed preoperatively in patients with perianal abscess to exclude leukaemia

of infection in patients with leukaemia receiving treatment.¹ Anorectal infection in patients with leukaemia has received little emphasis in standard textbooks. This is surprising as the prevalence of such complications is reportedly as high as 3%.² A report in 1934 stated that perianal abscess can be the presenting feature of acute leukaemia.³

Accurate preoperative diagnosis is essential as in many cases conservative treatment with antibiotics and radiotherapy is indicated.⁴ Haemorrhage due to thrombocytopenia is a possible hazard of surgical excision, and fatal septicaemic shock, as in case two, has been reported in nearly 25% of cases.⁴ A preoperative full blood and differential white cell count seems essential in any patient presenting with perianal abscess.

References

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- 2 Blank WA. Anorectal complications in leukemia. *Am J Surg* 1955;90:738-41.
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WORDS NUBES (Latin, cloud). OBNUBILATION means overclouding and, in a medical context, clouding of the mind. It is a fine piece of Victorian orotund magniloquence, to be uttered sententiously and with *gravitas*. I can see it now. "Doctor, my husband is very drowsy and talks muddled." "Yes, Madam, I fear there is a modicum of obnubilation." That generation of doctors, well grounded in school Latin, would have found nothing strange in such terminology. We still use the corresponding Greek root, typhos, cloud, mist, in TYPHUS and TYPHOID, so called because of the clouding of consciousness that is often a feature of these diseases. Another Latin word for cloud is NEBULA, a term used for clouding of the cornea. A device for converting a liquid into an aerosol, in fact a mist maker, is a NEBULISER. The corresponding Greek is nephele, whence we have NEPHELOMETER, an instrument for estimating the number of particles in a suspension by measuring the light scattering or cloudiness. It seems odd that the German language, which tends to eschew the use of ancient classical roots, has Nebel for mist or fog. NUBILE does not mean, as many people seem to think, sexually attractive (in the feminine gender); it means, of females, marriageable; from *L. nubere pp nuptum*, to be veiled in the presence of the bridegroom, hence to marry; the veil being a garment whose optical properties resemble those of a mist. Hence also NUPTIALS. His head may also be in a cloud—but pleasantly obnubilated. —B J FREEDMAN.

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