

Images in...

Basal cell carcinoma presenting as symptomatic iron deficiency anaemia

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DESCRIPTION

A 58-year-old white gentleman presented to an outpatient clinic with a 6-month history of fatigue and dyspnoea on exertion. The patient worked as a block mason and reported that he became short of breath when slowly walking over 100 yards. For at least 10 years, he had a medical history of hypertension and chronic low back pain. As a child he received head irradiation for an unknown fungal infection. At his outpatient visit, the patient was found to be severely anaemic and was referred for hospital admission.

Upon admission, the patient was also noted to have several large erythematous weeping and ulcerated lesions on his scalp, posterior neck and also the pinna of his left ear. Most notable was a 12×9 cm lesion covering the vertex of the scalp (figures 1 and 2). The patient confirmed that these ulcerations began as a coin-sized lesion that had unroofed and progressively expanded over the course of about 8 years. He regularly wore a baseball cap to conceal

the unsightly wound. According to the patient, the scalp lesion had been bleeding intermittently and actively draining for the past several years.

At presentation, the patient was afebrile. His pulse was 106. He was without laboured breathing or tachypnoea. Mucous membranes were moist. Other than his striking cutaneous findings, the remainder of his physical examination was otherwise unremarkable. Laboratory studies confirmed a severe anaemia. He was found to have a haemoglobin 5.8 g/dl (reference range: 14–17 g/dl) with a mean corpuscular volume of 65.5 fl (reference range: 80–100 fl). Peripheral smear showed profoundly hypochromic, microcytic red blood cells. The absolute reticulocyte count was inappropriately low at 71.1 g/l (reference range: 24–101) given his degree of anaemia. Ferritin was significantly decreased at 5 ng/ml (reference range: 32–284). Fecal occult blood testing was negative on three separate specimens. He was subsequently given three units of packed red blood



Figure 1 Locally invasive BCC which began as a coin-sized lesion 8 years ago.



Figure 2 Locally invasive BCC lesion demonstrating active serous drainage.



Figure 3 CT head without contrast depicting local soft tissue invasion without bone or brain involvement.

cells and consult was placed to cutaneous surgery. The patient underwent surgical intervention, which included a wide local excision of the tumour with split thickness skin grafts needed for closure of the lesion. Pathologic analysis of several portions of the lesion revealed an extensively ulcerated basal cell carcinoma (BCC) with vascular invasion identified. The peripheral surgical margins were free of disease, however, several specimens indicated disease in the deep margin of tissue with multiple foci of involvement within the underlying bone itself. Despite his clinical presentation and the surgical findings consistent with local invasion, he was not found to have metastatic disease on imaging studies of the brain and total body (figure 3). The patient's anaemia resolved several months following surgical excision and subsequent colonoscopy was completely normal.

As far as we know, only three other cases of symptomatic anaemia associated with lesions from BCC have been reported in the literature.¹⁻³ Interestingly enough, other causes of anaemia associated with extensive BCC include skeletal metastasis and myelophthitic anaemia. There have been a handful of case reports describing a similar presentation of symptomatic anaemia in patients with BCC attributed to metastatic disease and myelophthitic anaemia.⁴⁻⁵ However, this article represents the only case of symptomatic iron-deficiency anaemia from BCC in the last three decades. This article not only reports a unique case of profound anaemia related to a weeping BCC, but it also highlights an unusual presentation of a common malignancy.

Although the presentation of this patient's disease is uncommon, BCC is very common indeed. In fact, more than 1.2 million people are treated for BCC annually.⁶ The patient described in this case has several epidemiological factors that most likely contributed to his disease course.

BCC, which has five main subtypes, has a predilection for males over the age of 40, particularly in those with a history of heavy sun exposure and a poor ability to tan (skin phototypes I and II).⁷ As most would agree, ultraviolet light exposure is a fervent risk factor for any type of BCC. Moreover, states lying closer to the equator, such as Florida, California and Hawaii have an incidence of BCC at least twice that of the Midwestern USA.⁸ It is not surprising that over 90% of BCCs occur on the face or head.⁷ In addition, superficial therapeutic radiation, as for acne, psoriasis or in this patient's case, fungal infection, increases the risk of non-melanoma skin cancers, including BCC.⁹

Competing interests None.

Patient consent Obtained.

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