

Clinical Image

Leukaemia Cutis in a Patient with Chronic Myeloid Leukaemia with Blast Crisis

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Abstract:

Leukaemia cutis is a rare but important extra-medullary manifestation of Leukaemia. It develops due to the infiltration of neoplastic leukocytes or their precursors into the epidermis, dermis or subcutaneous tissue. Cutaneous presentation of Leukaemia cutis can precede, follow, present simultaneously with or may present in the absence of systemic Leukaemia. Here we present a pictorial of a 30-year-old male patient known to have Chronic Myeloid Leukaemia with blastic transformation to Acute myeloid Leukaemia with multiple cutaneous lesions, diagnosed as Leukaemia cutis.

Keywords: Leukaemia cutis, Chronic Myeloid Leukaemia, Acute Myeloid Leukaemia.



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Panel A



Panel B

Figure 1. Multiple papules, nodules and plaques of reddish-brown colored, non-pruritic, painless lesion skin with intact sensation on the chest (Panel A) and adjoining anterior shoulder (Panel B) which were diagnosed as Leukaemia cutis.

Case summary:

A 30-year-old man known to have chronic myeloid Leukaemia presented with multiple cutaneous lesions for 1 month and fever for 8 days. The patient was febrile, anemic and there were bilateral, nontender, multiple cervical, lymphadenopathy. There were multiple papules, nodules and plaques of reddish-brown colored present on his head, neck, back and chest. These skin lesions were non-pruritic, painless with intact sensation and diagnosed as Leukaemia cutis clinically.

Laboratory report showed Hb 6g/dl, ESR 105 mm in 1st hour, WBC: $67.78 \times 10^9/L$, Platelet: $13 \times 10^9/L$, RBC : $2.54 \times 10^{12}/L$. Differential count of WBC showed Neutrophil:20%, Lymphocytes:8%, Blast cell: 70%. Atypical mononuclear cell resembling myeloblast on peripheral blood film and flowcytometry with immune phenotyping revealed acute myeloid Leukaemia (AML). He was diagnosed as a case of chronic myeloid Leukaemia (CML) on the basis of positive

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RT PCR for major BCR-ABL (9:22) translocation in 2016. But this time he was diagnosed as a case of CML with blastic transformation to AML.

As the patient's condition was worse and his platelet count was reduced, skin biopsy was not done.

Leukaemia cutis, a rare cutaneous manifestation of hematological malignancies was first described by Biesiadecki in 1876.¹ Apart from Hematological malignancies, some other inflammatory, and infectious skin lesions can mimic Leukaemia cutis both clinically and on histologic examination.^{2,3} Leukaemia cutis mimics are Lymphoma and pseudolymphoma, Metastatic solid tumors, Pyoderma gangrenosum, Vasculitis, Drug reactions, Urticaria, Viral exanthem, Hidradenitis, Erythema multiforme, Erythema nodosum etc.^{2,3} In Leukaemia or lymphoproliferative disorder or myelodysplastic syndrome Leukaemia cutis is a late sign of disease but rarely may be the first manifestation of systemic disease.⁴ Acute myeloid Leukaemia (AML) with monocytic or myelomonocytic morphology and chronic lymphocytic Leukaemia are the most common subtype of Leukaemia, that can involve skin.⁵ Leukaemia cutis in AML or CML indicates not only aggressiveness of the course of the disease but also a shorter length of life. Central nervous system involvement in AML can be predicted by the

presence of Leukaemia cutis, as Leukaemia cutis has a strong association with extramedullary disease.⁶ So early notification of any skin eruption is required for early detection and management of Hematological malignancies, especially Leukaemia.

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