



# Generalized leukemia cutis as the initial presentation of pre-B-cell acute lymphoblastic leukemia

Kanoje Priyanka Kamlesh<sup>1</sup>, Geeti Khullar<sup>1</sup>, Amit Kumar Yadav<sup>2</sup>

Departments of <sup>1</sup>Dermatology and <sup>2</sup>Pathology, Vardhman Mahavir Medical College and Safdarjung Hospital, New Delhi

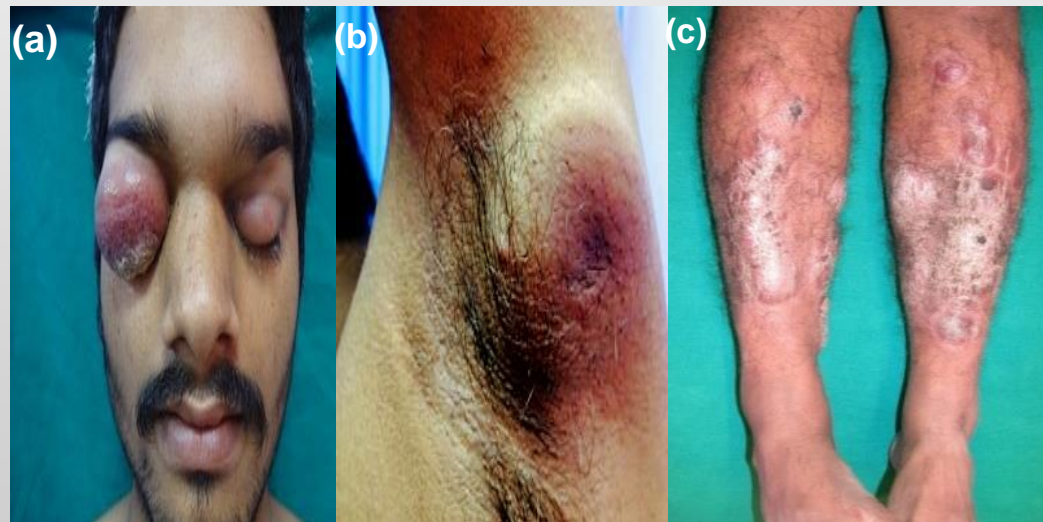
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## Introduction

- Pre-B-cell acute lymphoblastic leukemia (ALL) is uncommon, accounts for 2% of all acute leukemias
- Leukemia cutis occurs in 1-3% of ALL cases and is even rarer in pre-B-cell ALL

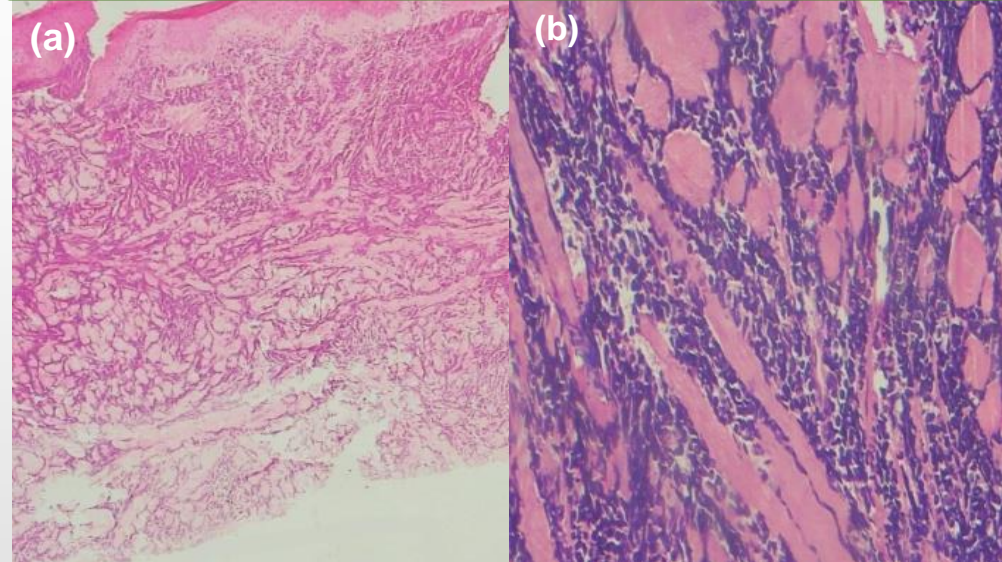
## Case description

- An 18-year-old male presented with 4-month history of asymptomatic erythematous nodules and plaques on face, trunk and extremities
- No history of fever, weight loss or systemic symptoms



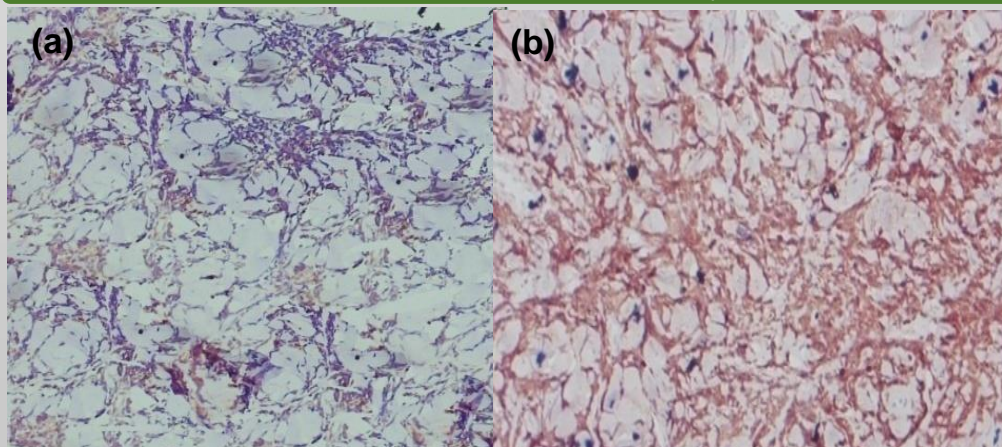
- (a) Single well-defined erythematous hard nodule with focal areas of yellowish-white crusting over right eyelid, encroaching upon the right eye. Small erythematous firm nodule present over left upper eyelid
- (b) Erythematous indurated nodulo-plaque with punched-out centre over left axilla.
- (c) Erythematous plaques with adherent crusting on bilateral legs.

## Histopathology



- a) Unremarkable epidermis and dense infiltrate throughout the dermis (H&E, 40X)
- b) Medium to large-sized, round tumor cells in Indian file pattern present between collagen bundles (H&E, 200X)

## Immunohistochemistry



Tumor cells positive for (a) CD19 and (b) terminal deoxynucleotidyl transferase (TdT)

Investigation	Result
Peripheral blood smear	Normal
FNAC (inguinal lymph node)	Hypercellular with monomorphic blast cells
Flow cytometry (bone marrow)	56% of blast cells, positive for CD79a, CD19, CD10, CD20, CD45, suggestive of B-cell origin
CSF analysis	Normal
CT scan (whole body)	Involvement of nasal cavity, sinuses, frontal lobe, retroperitoneal and inguinal lymph nodes, bone, skin metastases

Patient was treated with Modified Berlin-Frankfurt-Munster-95 protocol, with complete resolution of cutaneous and extracutaneous lesions at 1 year and is under follow-up

## Conclusion

- Leukemia cutis as the first manifestation of pre-B-cell ALL is uncommon
- Majority of cases described in children, rare in adults
- Usually localized, generalized distribution as in our case is infrequent

## Reference

1. Campuzano-Garcia AE, Torres- Alvarez B, Castanedo- Cazares JP. Leukemia cutis in a patient with pre B-cell acute lymphoblastic leukemia. JAAD Case Rep. 2015;1:364-7