

Milia like calcinosis cutis in a child with nephrotic syndrome

Y L B Karunarathne¹, K A S M Pereara², S Samaraweera³, J K K Seneviratne³

Sri Lanka Journal of Dermatology, 2021, 22: 76-77

Introduction

Milia like calcinosis cutis is a rare idiopathic form of cutaneous calcinosis. This condition is known to be associated with Down syndrome and most lesions were present on the hands and feet. Herein, we report a case of milia like idiopathic calcinosis cutis in a 10 year old girl with nephrotic syndrome.

Case report

A 10 year old girl with frequently relapsing steroid dependent nephrotic syndrome on mycophenolate mofetil and low dose prednisolone presented with asymptomatic numerous chalky white firm papules few millimetres in diameter, on her face mainly in the periorbital region (Figure 1). She was not on long term calcium or vitamin D supplements and denied any history of trauma, and no other skin lesions were present elsewhere. Her corrected serum calcium level and serum creatinine were normal. Histology of the shave biopsy revealed multiple well defined homogenous basophilic deposits in the dermis (Figure 2). On the basis of the characteristic clinical features, the diagnosis of milia like calcinosis cutis was made.



Figure 1. Numerous chalky white papules in the periorbital.

Discussion

Deposition of insoluble calcium salts in skin and subcutaneous tissue causes calcinosis cutis. It can be classified according to the underlying pathology into

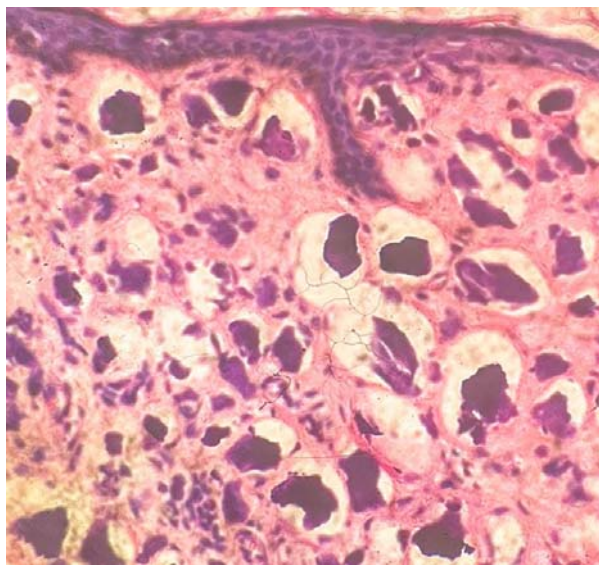


Figure 2. Amorphous well defined homogenous basophilic materials in hematoxylin and eosin stain.

five major categories, dystrophic, metastatic, idiopathic, iatrogenic and calciphylaxis. In dystrophic calcinosis cutis localized tissue damage causes calcification of tissues, with normal serum calcium and phosphate levels. Metastatic calcification occurs in normal skin with hypercalcemia with underlying metabolic derangements. Idiopathic calcinosis cutis can manifest as localized idiopathic dermal calcinosis, tumoral calcinosis, scrotal calcinosis and milia like idiopathic calcinosis cutis.

Milia like idiopathic calcinosis cutis is a rare dermatological condition described mainly during childhood. Down syndrome is known to be associated with milia like idiopathic calcinosis cutis. However, the exact aetiology of this condition remains unclear. Several theories have been suggested. One such hypothesis is aberrant calcification of sweat ducts, and another is secondary inflammation and calcium deposition in micro epidermal cysts. Premature ageing associated with Down syndrome is also proposed as a potential mechanism.

¹Registrar in Dermatology, ²Senior Registrar in Dermatology, ³Consultant Dermatologist, Lady Ridgeway Hospital for Children, Colombo, Sri Lanka.

Skin lesions appear as smooth chalky white papules resembling milia. Sometimes lesions are surrounded by erythema, and some lesions have a central crust due to progressive elimination of calcinosis. Hands and feet are commonly involved, and there are reported cases of involvement of the face. Histopathological examination reveals several amorphous basophilic materials in hematoxylin and eosin stain and black coloured deposits in Von Kossa stain.

Milia like calcinosis cutis, heals spontaneously without scarring and disappears before adulthood. However, the patient was concerned about the cosmetic disfigurement hence superficial shave removal of larger lesions was done.

References

1. Limaïem F, Bouslema S, Haddad I, Fadoua A, Bouraoui S, Lahmar A, Mzabi S. Milia-like idiopathic calcinosis cutis of the medial canthus. *Our Dermatol Online*. 2013; **4**(2): 212-4.
2. Kumar P, Savant S S, Nimisha E, Das A, Debbarman P. Milia-like idiopathic calcinosis cutis in a child with Down syndrome. *Dermatology Online Journal* 2016; **22**(5): 13030/qt7080c5gs.
3. Houtappel M, Leguit R, Sigurdsson V. Milia-like idiopathic calcinosis cutis in an adult without Down's syndrome. *J Dermatol Case Rep*. 2007; **1**(1): 16-19.
4. Solak B, Kara R O, Vargol E. Milia-like calcinosis cutis in a girl with Down syndrome. *An Bras Dermatol*. 2016; **91**(5): 655-7.