

Case Report

Colloid milium

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Abstract

Colloid milium is a rare cutaneous condition with at least three distinct subtypes, characterized clinically by the development of yellowish translucent papules or plaques on sun-exposed skin, and histologically by the presence of colloid in the dermal papillae. In this case report, we present a man with multiple small papules on dorsum of his hands that in pathology confirmed to be colloid milium. Colloid milium is more commonly observed in fair-skin patients and remain unchanged; however our patient had dark skin type (Fitzpatrick skin type III) and lesions were increasing in summer and decreasing in winter.

Key Words: Adult, biopsy, colloid, hand, male, milium, skin disease/pathology

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INTRODUCTION

Colloid milium was first described by Wagner in 1866 as “Das Colloid-Milium der Haut” and has been known historically as colloid pseudomilium, colloid infiltration, miliary colloidoma, hyaloma, and elastosis colloidalis conglomerate.^[1,2] Colloid milium is a degenerative condition linked to excessive sun exposure and possibly exposure to petroleum products and hydroquinone. The origin of the colloid deposition in the dermis is not certain, but it is thought to be due to degeneration of elastic fibers in the adult form and due to degeneration of UV-transformed keratinocytes in the juvenile form.^[3]

Adult colloid milium is a rare cutaneous deposition disorder characterized by multiple translucent papules on the sun-exposed areas of the face, neck, dorsum of

hands, and back. For diagnosis, a full-thickness skin biopsy is necessary but a patient’s history may be helpful.^[4] This case emphasizes the close relationship between long-term sun exposure and adult colloid milium.

CASE REPORT

A 38-year-old driver man from Ahvaz, Fitzpatrick skin type III, in otherwise good health was referred to our hospital for asymptomatic papules on dorsal of the hands of 3-year duration. These lesions developed within 3 years and were increasing in summer and decreasing in winter but none of them resolved.

Physical examination disclosed numerous small papules 2-3 mm in diameter, yellowish brown on dorsal of the hands [Figures 1-3].

He had no other current or past medical problems. His medical history was negative for photosensitizing medications and disorders. Familial history was negative.

A biopsy was taken from one of these lesions, and diagnosis of colloid milium was confirmed.

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Figure 1: Patient's lesions



Figure 2: Patient's lesions

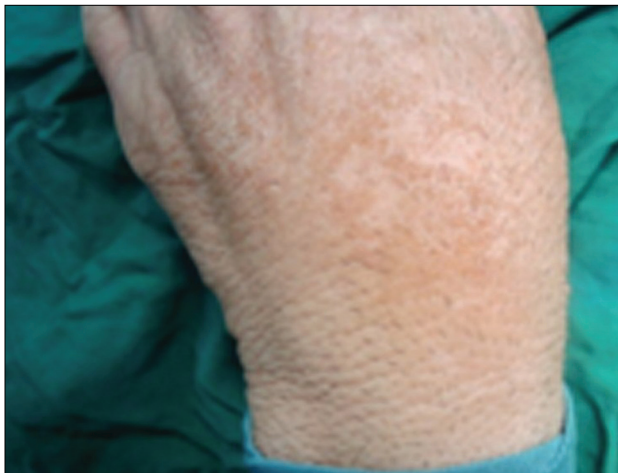


Figure 3: Patient's lesions

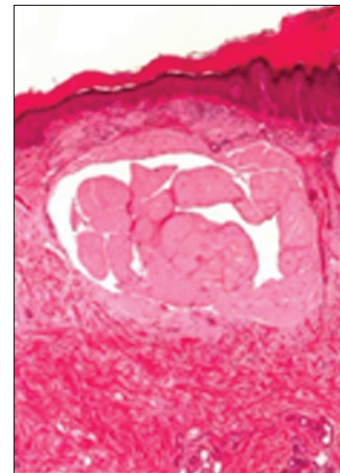


Figure 4: Homogenous, fissured mass in dermal papillae (H and E)

Histologic exam by hematoxylin and eosin staining revealed deposition of pale eosinophilic homogenous material containing artifactual fissures in dermal papillae [Figure 4].

DISCUSSION

Colloid milium is a degenerative change and called colloid degeneration of the skin or dermal hyalinosis. The condition may not represent a single entity and should be regarded as one of cutaneous deposit diseases.^[5] The origin of the colloid deposition in the dermis is not certain, but it is thought to be due to degeneration of elastic fibers in the adult form and due to degeneration of UV-transformed keratinocytes in the juvenile form.^[3] Colloid milium is characterized clinically by the development of yellowish, translucent papules or plaques on sun-exposed skin, and histologically by the presence of colloid in the dermal papillae. The cause is uncertain. There are three clinical types: Adult form, juvenile form, and nodular colloid degeneration.

The adult form can be considered as a consequence of exposure to sun, hydroquinone, petroleum, and chemical fertilizers.^[2,4] Some authors consider the adult form to be a variant of actinic elastosis.^[6] Cases among refinery workers in the tropics suggest that trauma and the photodynamic effects of phenols in oxide fuel (gas oil) may be contributory factors.^[7,8]

The juvenile form is often familial and begins before puberty, and can be distinguished from a non-familial form occurring later in life. Although light appears to play little part in provoking the lesions in the juvenile form, it is certainly implicated in older patients, among whom the incidence is highest in fair-skinned, outdoor workers in sunny climates.^[2,9-11]

Nodular colloid degeneration has also been classified as a variant of nodular amyloidosis. The disorder most commonly presents as an isolated nodule on the face, trunk, or scalp.^[4]

The most frequently involved sites for colloid milium

are the face, especially around the orbits, the dorsa of the hands, the back and sides of the neck and the ears. Small dermal papules 1-2 mm in diameter, yellowish brown and sometimes translucent, develop slowly and more or less symmetrically in irregular groups in areas exposed to sunlight. They feel soft and may release their gelatinous contents when punctured. Although Colloid milium may become more severe and more extensive over the years, most cases reach their maximum development within 3 years and then remain unchanged.^[12]

The histological and clinical findings together are unmistakable, although the former alone may be difficult to differentiate from amyloidosis. Similar papular lesions are seen in severe actinic elastosis.^[5,13]

By light microscopy, colloid milium is found in the middle and upper dermis and is characterized by accumulation of a homogenous, amorphous, faintly eosinophilic material with cleft like spaces. The overlying epidermis is intact and may be hyperkeratotic or flattened.^[14]

Treatment for actinic elastosis have been used in adult patients, including topical retinoid.^[6] Improvement has been reported following dermabrasion^[15] and ablation with the Er: YAG laser.^[1] Destruction of the lesions with the diathermy or with cryotherapy has also been advocated, but the cosmetic result is seldom satisfactory.

CONCLUSION

This case emphasizes the close relationship between long-term sun exposure and adult colloid milium.

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REFERENCES

1. Christie T, Joseph M, George J, Hruza G. Adult-onset facial colloid milium successfully treated with the long-pulsed Er: Yag laser. *Dermatol Surg* 2002;28:215-9.
2. Innocenzi D, Barduagni F, Cerio R, Wolter M. UV-induced colloid milium. *Clin Exp Dermatol* 1993;18:347-50.
3. Kobayashi H, Hashimoto K. Colloid and elastic fibre: Ultrastructural study on the histogenesis of colloid milium. *J Cutan Pathol* 1983;10:111-22.
4. Lim C, Li M. Colloid milium arising in a non sun exposed area in an adult. *Australas J Dermatol* 2006;47:137-8.
5. Hashimoto K, Miller F, Bereston ES. Colloid milium: Histochemical and electron microscopic studies. *Arch Dermatol* 1972;105:684-94.
6. Dummer R, Laetsch B, Stutz S, Schärer L. Elastosis colloidalis conglomerate (adult colloid milium, paracolloid of the skin) a maximal manifestation of actinic elastosis. *Eur J Dermatol* 2006;16:163-6.
7. Findlay GH, Morrison JG, Simson IW. Exogenous ochronosis and pigmented colloid milium from hydroquinone bleaching creams. *Br J Dermatol* 1975;93:613-22.
8. Muscardin L, Bellocci M, Balus L. Papuloverrucous colloid milium: An occupational variant. *Br J Dermatol* 2000;143:884-7.
9. Handfield-Jones SE, Atherton D, Black M. Juvenile colloid milium. *Br J Dermatol* 1991;125:80-1.
10. Chowdhury M, Blackford S, Williams S. Juvenile colloid milium. *Br J Dermatol* 1999;141:102-7.
11. Hashimoto K, Kumakiri M. Colloid-amyloid bodies in PUVA-treated human psoriatic patients. *J Invest Dermatol* 1979;72:70-80.
12. Muzaffa W, Dar NR, Malik AM. Colloid milium of the upper eyelid margins. *Ophthalmology* 2002;109:1944-6.
13. Hashimoto K, Black M. Colloid milium: A final degeneration product of actinic elastoid. *J Cutan Pathol* 1985;12:147-56.
14. Lewis A, Le E, Quan L, Krishnan B, Schulmeier J, Hsu S. Unilateral colloid milium of the arm. *J Am Acad Dermatol* 2002;46:65-7.
15. Apfelberg DB, Druker D, Spence B, Maser MR, Lash H. Treatment of colloid milium of the hand by dermabrasion. *J Hand Surg Am* 1978;3:98-100.

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