

Milia en Plaque

Sang Hyun Cho, M.D., Koo Seog Chae, M.D.,
Young Min Park, M.D., Baik Kee Cho, M.D.

*Department of Dermatology, College of Medicine, The Catholic University of Korea,
Seoul, Korea*

Milia en plaque is characterized by multiple milia-like lesions within an erythematous edematous plaque in the postauricular area. The histopathological findings are those of milia. We report a case of milia en plaque occurring on the scapha's fossa of the left auricle in a 3-year-old boy. (Ann Dermatol 9:(2) 174~176, 1997).

Key Words : Milia en plaque

Milia are small subepidermal epithelium-lined keratinous cysts¹. These tiny epidermal cysts may arise de novo or may follow a number of dermatoses, particularly bullous eruptions and skin trauma¹⁻³. Milia en plaque, an unusual clinical variant of milia, is very rare and only nine cases have been reported in the literature⁴⁻¹⁰. We describe another case of milia en plaque in a 3-year-old boy and the literature concerning this subject is reviewed.

REPORT OF A CASE

A 3-year-old boy presented with an asymptomatic plaque on the scapha's fossa of the left auricle that had developed over 2 months. There was no history of local trauma, exposure to ionizing radiation, systemic or topical medication, or a similar eruption in any family member. Examination revealed multiple, white-to-yellow, 1 to 2 mm papules within an erythematous, indurated, 0.5 × 2 cm plaque on the scapha's fossa of the left auricle (Fig. 1). Histological examination of the papules revealed a keratin-filled cyst lined by a stratified epithelium of a few cell layers and an inflammatory reaction in the upper dermis (Fig. 2). The plaque was

excised and there was no recurrence after 6 months of follow-up.

DISCUSSION

Milia are subepidermal epithelial cysts that clinically appear as white-to-yellow, 1 to 2 mm globular bodies with a smooth surface and superficial location¹⁻³. Two types are recognized: primary milia, which arise spontaneously, and secondary milia, which occur either in diseases, or after trauma, such as dermabrasion, or after long-term corticosteroid use, or 5-fluorouracil therapy¹⁻³.

In 1978 Hubler et al.⁴ reported two cases with an unusual form of milia on an erythematous edematous base on the postauricular area without an obvious cause. The name "milia en plaque" was proposed for this unusual condition. Thereafter, only seven additional cases have been reported⁵⁻⁷. They shared some clinical features such as the occurrence being localized to the auricular region and the presence of an underlying erythematous edematous plaque. These findings differentiate the milia en plaque from classic primary milia. Our patient was similar to the previously reported cases. However, our case was somewhat different from the other cases in the patient's age and involved site. Our patient was a three-year-old boy and the lesion developed on the scapha's fossa of the left auricle. Unusual location of the supraclavicular area was reported in one case⁹. Histological findings in this case and others were compatible with those of milia but one case⁶

Received December 26, 1996.

Accepted for publication February 14, 1997.

Reprint request to : Sang Hyun Cho, M.D., Department of Dermatology, College of Medicine, The Catholic University of Korea, Seoul, Korea

Table 1. Clinical and histological features of 6 reported cases with milia en plaque

Case (reference No.)	Age(yr)/Sex	Duration	Site	Distribution	Symptom	Histopathology
1(4)	49/F	< 1 yr	*post.	*uni.	none	milia
2	43/F	2 mo	post.	uni.	none	milia
4(5)	39/F	1 yr	post.	uni.	slight pruritus	milia
3(6)	14/M	2 yr	post.	uni.	none	hybrid cyst
5(7)	59/F	2 yr	**pre.	**bi.	none	milia
6(8)	49/F	3 mo	post.	bi.	pruritus	milia
7(9)	42/M	1 yr	supraclavicular area	uni.	none	milia
8(10)	50/M	6 mo	ear lobes	**bi.	?	milia
9	48/M	1 yr	ear lobes and anterior to tragus	uni.	?	milia
10(present case)	3/M	2 mo	auricle (scapha's fossa)	uni.	none	milia

*post. ; postauricular

**pre. ; preauricular

*uni. ; unilateral

**bi. ; bilateral

Fig. 1. Multiple, white to yellow, 1 to 2 mm papules within an erythematous, indurated, 0.5 × 2 cm plaque on the scapha's fossa of the left auricle.

Fig. 2. A keratin-filled cyst lined by a stratified epithelium and inflammatory reaction in the upper dermis (H&E stain, × 40).

with a hybrid cyst. The clinical and histological features of our case and other reported cases are summarized in Table 1.

Clinically, milia en plaque should be differentiated from lichen planus tumidus folliculans, comedone naevus, trichoadenoma, nodular elastosis of Favre-Racouchot, follicular mucinosis and a rare variant of mycosis fungoides⁷. The principal condition in the differential diagnosis is lichen planus tumidus folliculans, a plaque variety of lichen planus pilaris. It is characterized by a tumor-like

reddish/violaceous plaque, surmounted by small cysts and comedones, particularly in the retroauricular area resembling milia en plaque. However, histologically, its picture is of lichen planus pilaris. Another possible diagnosis is comedone naevus, which appears at an early age as in our case. The histological findings of this condition include spacious infundibular dilations full of keratin, with bulbous proliferations of basalioid cells at the base. Our case lacked these pathological changes. The other diseases could also be easily distinguished

from our case by histopathological examinations.

The pathogenesis of milia is not clear. Primary milia of the face represent a keratinizing type of benign tumor arising from the infundibular follicular epithelium². In contrast, secondary milia represent retention cysts¹¹ and reactive epithelial proliferation². Careful history-taking and observation in the patients with milia en plaque did not reveal any known stimulus or external actions that might produce secondary milia. Also there were no identifiable triggering factors in our patient. The physiopathogenic mechanism of milia en plaque remains unknown. Nonetheless three hypotheses were proposed by other authors: an idiopathic subtle connective tissue degeneration resulting in the expansion of the follicles and milia formation, the effect of inapparent or neglected external factors, and the sequela of previous lichen planus tumidus folliculans⁷.

Treatments of milia en plaque have been topical tretinoin^{4,6} and electrodesiccation⁷. In our patient surgical excision was performed and there was no recurrence after 6 months of follow up.

REFERENCES

1. Koh HK, Bhawan J: Tumors of the skin. In: Moschella SL, Hurley HJ, (eds): *Dermatology*. 3rd ed, vol 2, WB Saunders, Philadelphia, 1992, p1726.
2. Lever WF, Schaumburg-Lever G: *Histopathology of the skin*. 7th ed, JB Lippincott, Philadelphia, 1990, p536.
3. Arnold HL, Odom RB, James WD: *Diseases of the skin: clinical dermatology*. 8th ed, WB Saunders, Philadelphia, 1990, p806.
4. Hubler WR, Rudolph AH, Kelleher RM: Milia en plaque. *Cutis* 22:67-70, 1978.
5. Samlaska CP, Benson PM: Milia en plaque. *J Am Acad Dermatol* 21:311-313, 1989.
6. Lee DW, Choi SW, Cho BK: Milia en plaque. *J Am Acad Dermatol* 31:107, 1994.
7. A.Losada-Campa, C.De La Torre-Fraga, M.Cruces-Prado: Milia en plaque. *Br J Dermatol* 134:970-972, 1996.
8. Stork J: Retroauricular Bilateral 'Milia en Plaque'. *Dermatology* 191:260-261, 1995.
9. Combemale P, Faisant M, Dupin M: 'Milia en Plaque' in the Supraclavicular Area. *Dermatology* 191:262-263, 1995.
10. Keohane SG, Beveridge GW, Benton EC, Cox NH: Milia en plaque-a new site and novel treatment. *Clin Exp Dermatol* 21:58-60, 1996.
11. Epstein W, Kligman AM: The pathogenesis of milia and benign tumors of the skin. *J Invest Dermatol* 26:1-11, 1956.