



# Mucinous Syringometaplasia on the Neck in a Child

Ji Sun Kim, Yu Jin Jeon, Joong Sun Lee, Hye Kyung Lee, Dae Won Koo

Department of Dermatology, Eulji University Hospital, Eulji University School of Medicine, Daejeon, Korea

Dear Editor:

Syringometaplasia is a benign, metaplastic cellular process that affects the eccrine ducts and glands due to various physiological or pathological stimuli<sup>1</sup>. There are three types of syringometaplasia; squamous, mucinous, and adenomatous. Each of them represents different clinical presentations and histological features. In this case report, we will introduce a case of mucinous syringometaplasia with atypical presentation.

An 8-year-old child presented with an asymptomatic solitary erythematous papule on the right side of her anterior neck a year ago. She was diagnosed with verruca in another local hospital and got laser ablation, but there was no improvement.

The physical examination of the lesion revealed the papule overlying an erythematous patch with a central pore and serous discharge was accompanied when squeezed (Fig. 1). There were no specific findings beneath or on adjacent skin lesions in the neck sonography.

Punch excision was done and the histopathologic examination demonstrated ductal structure lined with mucin containing epithelium, and goblet cells with no significant mitoses in the upper dermis and acanthotic adjacent epidermis (Fig. 2A, B). In special stains, the goblet cells showed pinkish color in PAS stain (Fig. 2C), and there were positive reactions on the epithelial cells in EMA and CEA stains (Fig. 2D, E) while they were negative in S-100 protein stain. The final diagnosis was mucinous syringometaplasia, and the patient has been observed for 4 months after removal of the lesion. During the

follow-up period no recurrence was observed.

Mucinous syringometaplasia was first described in 1974, and it was first thought to be a benign muciparous epidermal tumor<sup>2</sup>. However, it is now believed to represent metaplastic change occurring on eccrine ducts as reactive non-neoplastic processes due to trauma, pressure, or inflammation<sup>1-3</sup>.

Usually, it appears as a solitary lesion and there are typically two different forms: one is a papule or nodule resembling verruca vulgaris on the plantar surface of foot or finger, and the other is a plaque resembling basal cell carcinoma on non-acral lesions<sup>1,2,4</sup>. However, other forms are also possible.



**Fig. 1.** (A) Solitary erythematous papule on the right side of anterior neck. (B) Papule overlying erythematous patch with central pore.

**Received** March 9, 2020 **Revised** February 9, 2021 **Accepted** March 13, 2021

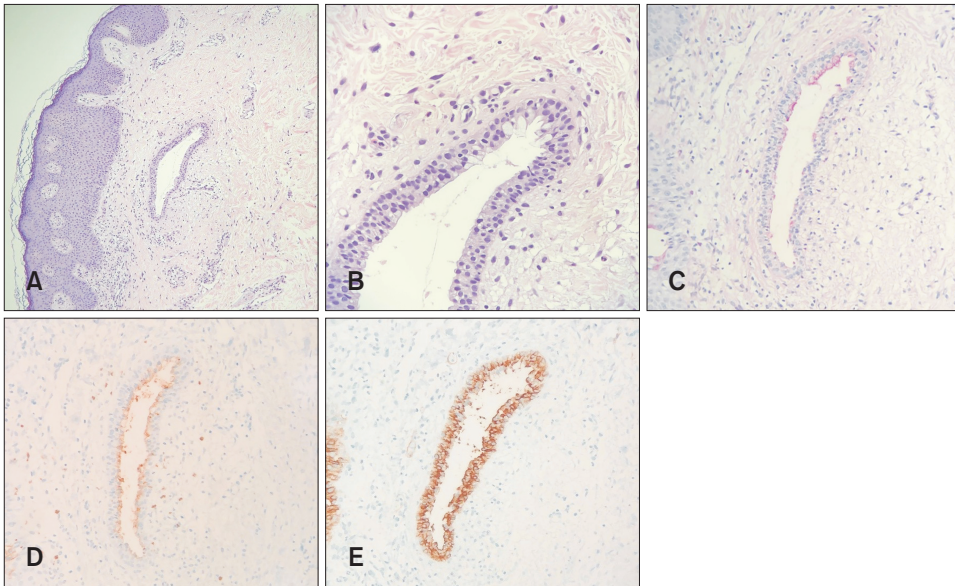
## Corresponding Author

Dae Won Koo

Department of Dermatology, Eulji University Hospital, Eulji University School of Medicine, 95 Dunsanse-ro, Seo-gu, Daejeon 35233, Korea

Tel: +82-42-611-3037, Fax: +82-42-259-1111, E-mail: [dwkoo@eulji.ac.kr](mailto:dwkoo@eulji.ac.kr)

<https://orcid.org/0000-0001-8587-0205>



**Fig. 2.** (A, B) Ductal structure lined with mucin containing epithelium and goblet cells with no significant mitoses in the upper dermis and acanthotic adjacent epidermis (A: H&E,  $\times 40$ , B: H&E,  $\times 400$ ). (C) Pinkish stain on mucin containing cells (PAS,  $\times 200$ ). (D) Weak positivity on epithelial lining cells (CEA,  $\times 200$ ). (E) Strong positivity on epithelial lining cells (EMA,  $\times 200$ ).

Histologic features of mucinous syringometaplasia are epidermal invagination and underlying eccrine duct lined with surrounding squamous cells and epithelium of mucin-laden goblet-like cells<sup>3,4</sup>. The mucin containing cells are shown to stain positively for PAS, Alcian blue, CEA, and Cam5.2 and negatively for S-100 protein<sup>2</sup>. Mucinous syringometaplasia is confirmed by histologic examination and is treated by complete excision<sup>1</sup>.

Mucinous syringometaplasia is a rare metaplastic change of eccrine duct and has not been reported in Korea. In this case, it was shown in the neck as an erythematous papule with a central pore, not a typical patch or plaque resembling basal cell carcinoma or nodule like other adnexal tumors. This report is the first case of mucinous syringometaplasia in Korea and it is significant because of its atypical clinical presentation.

It is important for dermatologists to perform a histological examination to distinguish other diseases with structural abnormalities in children with these lesions. Further study and investigation into mucinous syringometaplasia are needed to demonstrate its other clinical presentations.

## ACKNOWLEDGMENT

We received the patient's consent form about publishing all photographic materials.

## CONFLICTS OF INTEREST

The authors have nothing to disclose.

## FUNDING SOURCE

None.

## ORCID

Ji Sun Kim, <https://orcid.org/0000-0003-1982-6331>

Yu Jin Jeon, <https://orcid.org/0000-0002-2134-3585>

Joong Sun Lee, <https://orcid.org/0000-0003-2562-4090>

Hye Kyung Lee, <https://orcid.org/0000-0002-4678-1274>

Dae Won Koo, <https://orcid.org/0000-0001-8587-0205>

## REFERENCES

1. Abbas O, Bhawan J. Syringometaplasia: variants and underlying mechanisms. *Int J Dermatol* 2016;55:142-148.
2. Trotter MJ, Stevens PJ, Smith NP. Mucinous syringometaplasia--a case report and review of the literature. *Clin Exp Dermatol* 1995;20:42-45.
3. Bañuls J, Ramón R, Silvestre JF, Alfonso R, Betlloch I, Botella R, et al. Mucinous metaplasia of apocrine duct. *Am J Dermatopathol* 1998;20:189-193.
4. Bergman R, David R, Friedman-Birnbaum R, Harth Y, Bassan L. Mucinous syringometaplasia. An immunohistochemical and ultrastructural study of a case. *Am J Dermatopathol* 1996;18:521-526.