

A diagnostic enigma: eruptive syringoma in an adolescent girl

Um enigma em erupção rápida: siringoma eruptivo numa adolescente

Paridhi Vaidh¹, Farheen Begum¹, Adithya Prakash^{1*} , and Milan Tripathy²

¹Department of Dermatology, Venereology and Leprosy; ²Department of Pathology. Kalinga Institute of Medical Sciences, Bhubaneswar, Odisha, India

Abstract

Eruptive syringoma is a rare, benign eccrine ductal tumor that presents as sudden crops of multiple, firm, skin-colored papules and is frequently mistaken for common facial papular eruptions. We report a 17-year-old female with a 3-month history of asymptomatic papules clustered symmetrically around the eyelids and oral commissures, with additional similar lesions over the abdomen; clinical differentials included milia, sebaceous hyperplasia, xanthoma, trichoepithelioma, and acneiform eruption. Dermoscopy showed whitish to yellowish structureless areas with ovoid globules in a reticular pattern on a light brown background, without central umbilication or follicular openings. Histopathology confirmed the diagnosis by demonstrating multiple small eccrine ducts within a fibrous stroma, lined by two layers of cuboidal cells with characteristic comma-shaped “tadpole” extensions and luminal eosinophilic material. The patient was reassured and treated for cosmetic concern with radiofrequency ablation of facial lesions, with residual lesions managed using topical tretinoin, highlighting the importance of recognizing this benign entity and confirming it with biopsy to prevent misdiagnosis and unnecessary treatment.

Keywords: Eruptive syringoma. Eccrine duct tumor. Facial papular eruption. Periorbital papules.

Resumo

O siringoma eruptivo é um tumor écrino ductal raro e benigno que se manifesta por uma erupção súbita de múltiplas pápulas firmes da cor da pele e é frequentemente confundido com outras erupções papulares faciais comuns. Relatamos o caso de uma jovem de 17 anos com um historial de três meses de pápulas assintomáticas agrupadas simetricamente em redor das pálpebras e comissuras orais, com lesões adicionais semelhantes no abdómen. Os diagnósticos diferenciais clínicos incluíram milia, hiperplasia sebácea, xantoma, tricoepitelioma e erupção acneiforme. A dermoscopia revelou áreas esbranquiçadas a amareladas sem estrutura, com glóbulos ovóides em padrão reticular sobre um fundo castanho claro, sem umbilicação central ou aberturas foliculares. A histopatologia confirmou o diagnóstico ao demonstrar múltiplos pequenos ductos écrinos dentro de um estroma fibroso, revestidos por duas camadas de células cubóides com extensões características em forma de vírgula em forma de “girino” e material eosinofílico luminal. O paciente foi tranquilizado e tratado por preocupação estética com ablação por radiofrequência das lesões faciais, com lesões residuais geridas com tretinoína tópica, destacando a importância de reconhecer esta entidade benigna e confirmá-la com biópsia para evitar diagnósticos errados e tratamentos desnecessários.

Palavras-chave: Siringoma eruptivo. Tumor do ducto écrino. Erupção papular facial. Pápulas periorbitais.

*Correspondence:

Adithya Prakash
E-mail: prakashadithya14@gmail.com
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Introduction

Syringoma, a benign tumor that often masquerades as a cosmetic nuisance, remains a diagnostic chameleon for dermatologists. Originating from the intraepidermal portion of eccrine ducts, syringomas typically present as minute, firm, flesh-colored papules, most commonly around the eyelids and upper cheeks of women at puberty or early adulthood.¹

Eruptive syringoma, among the rarest clinical forms, was first described by Jacquet and Darier in 1887 and is characterized by crops of skin-colored papules over the face, trunk, or limbs.² Its close resemblance to acne, milia, xanthomas, or trichoepithelioma often leads to misdiagnosis or delayed recognition. Recent Indian studies emphasize facial and periorbital predominance in young women, with histopathology being the gold standard for diagnosis.³ This case adds to the limited literature by presenting an acute onset of the facial eruptive variant that evolved within a short span of 3 months.

Case report

A 17-year-old female presented with a 3-month history of multiple, asymptomatic, skin-colored papules distributed around the eyes, mouth, and trunk. The lesions had appeared gradually in small crops and remained stable thereafter. There was no history of itching, pain, photosensitivity, or drug use. The patient denied any relevant personal and family history.

Cutaneous examination revealed numerous, discrete to coalescing, 1-3 mm, smooth, firm papules symmetrically arranged around the eyelids and oral commissures and diffusely over the abdomen. The papules were flesh-colored, slightly translucent, and showed no surface changes or umbilication. The rest of the face, mucosae, hair, and nails were unremarkable (Figs. 1 and 2).

Given the sudden facial eruption, differentials of xanthoma, acneiform eruption, sebaceous hyperplasia, milia, and trichoepithelioma were considered (Table 1). Routine hematological and biochemical parameters were within normal limits. Dermoscopy of the periorbital lesions revealed multiple whitish to yellowish structureless areas and ovoid globules arranged in a reticular pattern over a light brown background, with occasional fine linear vessels. No central umbilication or follicular openings were observed (Fig. 3).

A punch biopsy taken from the periorbital region showed a normal epidermis with multiple small ducts embedded within a fibrous stroma in the upper dermis.



Figure 1. Numerous, discrete to coalescing, 1-3 mm, smooth, firm papules symmetrically arranged around the eyelids and oral commissures.

The ducts were lined by two layers of cuboidal epithelial cells, with some forming characteristic comma-shaped (“tadpole”) extensions and lumina containing amorphous eosinophilic material. These characteristic histopathological findings established the diagnosis of eruptive syringoma. No cytologic atypia or mitotic activity was identified, supporting the benign nature of the lesion (Fig. 4A and B).

The patient was reassured regarding the benign nature of the condition. As the lesions were asymptomatic and primarily of cosmetic concern, she underwent radiofrequency ablation of the facial lesions, whereas a few residual lesions were managed conservatively with topical tretinoin 0.025%. At the 2-month follow-up, there was a significant reduction in lesion size, with no appearance of new lesions.

Discussion

Eruptive syringoma is a challenging diagnosis due to its varied clinical manifestations and poorly understood

Table 1. Differential diagnosis of facial papular eruptions

Condition	Key features	Differentiating clues from syringoma
Milia	Small pearly papules, often post-inflammatory	Keratinous cysts; no dermal ducts
Sebaceous hyperplasia	Yellow umbilicated papules with central pore	Lobules of sebocytes; follicular opening
Xanthoma	Soft yellow plaques around eyes	Foamy histiocytes; no ductal structures
Trichoepithelioma	Firm papules, cheeks or nasolabial folds	Basaloid nests with horn cysts
Flat wart/Lichen planus	Flat-topped or violaceous papules	Viral/lichenoid histology
Acneiform eruption	Inflammatory papules, pustules, comedones	Folliculocentric with inflammation

**Figure 2.** Numerous, discrete to coalescing, 1-3 mm, smooth, firm papules present diffusely over the abdomen.

pathogenesis. Traditionally regarded as a benign adnexal neoplasm arising from the eccrine sweat ducts, the eruptive form is often characterized by a sudden onset of numerous asymptomatic papules that may present in successive crops and often involve the face, trunk, neck, and limbs. The disease predominantly affects women and typically presents before or during puberty; however, late-onset and atypical cases are increasingly recognized, highlighting the need to consider this diagnosis across age groups.⁴

In a pivotal series by Soler-Carrillo et al.⁴ involving 27 patients, 90% were women, and the most common sites included the neck and anterior trunk, whereas facial involvement was relatively rare. Key clinicodemographic patterns and reported onset durations across major series are summarized in Table 2. More recent cohorts such as

**Figure 3.** Dermoscopy of a periorbital lesion showed multiple whitish to yellowish structureless areas with ovoid globules in a reticular pattern on a light brown background, with occasional fine linear vessels. No central umbilication, follicular openings, or comedo-like orifices were observed.

Lei et al. and Tiwary et al.^{3,5} have demonstrated a growing prevalence of facial and periorbital involvement, especially in young women aged 20-30 years. Large clinicopathologic reviews, such as that by Ghanadan and Khosravi,⁶ have reaffirmed the predominance of syringoma in young women and the frequent diagnostic confusion with xanthoma, flat warts, or lichen planus.

Table 2. Review of reported cases of eruptive syringoma

Author/Year	No. of cases	Age group	Common sites	Onset duration	Remarks
Soler-Carrillo et al., 2001 ⁴	27	15-40 years	Neck > trunk	Gradual (years)	Classic eruptive
Ghanadan and Khosravi, 2013 ⁶	34	20-35 years	Face, trunk	Gradual	Frequent diagnostic confusion
Tiwary et al., 2022 ³	50	18-30 years	Periorbital	6–12 months	Indian cohort
Lei et al., 2023 ⁵	90	20-30 years	Face	Variable	Increasing facial involvement
Eittidachachote et al., 2024 ⁹	1	64 years	Face, neck, chest	5 years	Late-onset clear cell variant: Associated with impaired glucose intolerance
Present case, 2025	1	17 years	Periorbital + Perioral + trunk	3 months	Acute eruptive variant

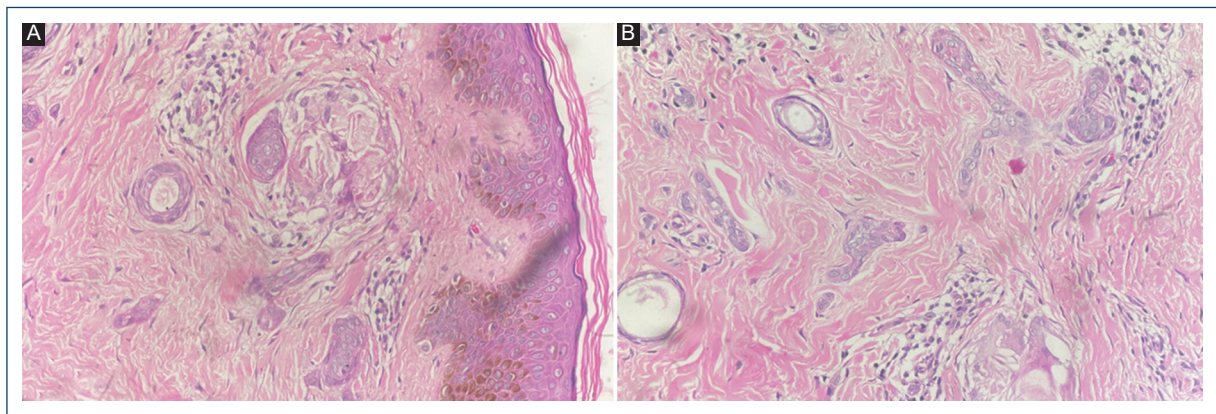


Figure 4. **A:** hematoxylin and Eosin (H&E) stain ×10: multiple small eccrine ductal structures embedded within a dense fibrous stroma in the superficial dermis, with characteristic comma-shaped (“tadpole”) ductules, consistent with syringoma. **B:** H&E stain ×40: well-circumscribed epithelial ductules embedded within a densely fibrotic stroma. The ductules are lined by two layers of cuboidal epithelial cells, with lumina containing amorphous eosinophilic material and characteristic comma-shaped (“tadpole”) extensions, consistent with syringoma.

The pathogenesis remains uncertain. Hormonal influence has long been proposed, supported by estrogen and progesterone receptor positivity in some lesions.⁷ Seirafi et al. described a perieccrine lymphocytic infiltrate, suggesting that eruptive syringoma might represent reactive hyperplasia following mild inflammation rather than a true neoplasm.⁸

Interestingly, Eittidachachote et al. reported a late-onset eruptive clear-cell variant associated with altered glucose metabolism, supporting the role of systemic metabolic factors in eccrine ductal change. In contrast, our patient’s acute evolution without metabolic abnormality favors a reactive, transient eccrine dysregulation. Together, these observations suggest both

metabolic and reactive pathways may underlie different ends of the eruptive syringoma spectrum.⁹

Our case adds a unique temporal dimension: the short, 3-month eruptive course localized to the periorbital, perioral, and truncal areas, a presentation seldom reported. The clustered, symmetrical facial lesions mimicking acneiform eruption also underscore the need for biopsy when clinical ambiguity persists (Table 1).

Diagnosis rests on histopathology: multiple ducts and epithelial cords embedded in fibrous stroma, lined by two rows of cuboidal cells with characteristic comma-shaped “tails.” Fine needle aspiration cytology may suggest a benign adnexal lesion but lacks specificity.¹ Dermoscopy and reflectance confocal microscopy have

emerged as valuable, non-invasive diagnostic adjuncts, demonstrating white globules and ductal reflections that correlate with histological ducts.¹⁰

Management poses a significant challenge because treatments are largely cosmetic and recurrence is common. While carbon dioxide and Erbium-doped yttrium aluminum garnet lasers, trichloroacetic acid, and electrocautery have shown partial success, recurrence and scarring limit aggressive therapy.^{5,11} Topical atropine may relieve pruritus in symptomatic cases, and oral tranilast or retinoids have shown modest benefit. Patient reassurance and minimal intervention remain the mainstay.

Conclusion

Eruptive syringoma, though benign, presents both diagnostic and cosmetic challenges. This case highlights an acute-onset facial and truncal variant that clinically mimicked acneiform eruption in a young woman. Recognizing its characteristic dermoscopic and histopathological features is crucial for accurate diagnosis and patient reassurance. Early identification of such atypical, short-duration presentations can prevent unnecessary treatments and guide appropriate counseling. Ultimately, timely recognition and conservative management not only avoid mismanagement but also help restore patient confidence in what is, paradoxically, a harmless yet socially impactful dermatosis.

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Conflicts of interest

None.

Ethical considerations

Protection of human subjects and animals. The authors declare that no experiments on humans or animals were performed for this research.

Confidentiality, informed consent, and ethical approval. The authors have followed their institution's confidentiality protocols, obtained informed consent from all patients, and secured approval from the Ethics Committee. SAGER guidelines have been followed as applicable to the nature of the study.

Declaration on the use of artificial intelligence. The authors declare that no generative artificial intelligence was used in the writing or creation of the content of this manuscript.

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