

## **Recurrent Miliaria Crystallina Associated with Acute Psychological Distress: A Case Report**

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### **ABSTRACT:**

Miliaria, also known as eccrine miliaria, is a benign skin disorder caused by obstruction of the eccrine sweat ducts, leading to accumulation of sweat into the epidermis or dermis. Crystallina, the most superficial and non-erythematous subtype of miliaria, is characterized by tiny, clear, fragile vesicles localized to the stratum corneum. Though predominantly seen in neonates, Miliaria Crystallina may also rarely affect older children and adults, especially in conditions of heat, humidity, or fever. We have reported a rare case of recurrent MC in a 16-year-old male with a history of similar episodes since age. The patient presented with superficial, fluid-filled vesicles across the face and hands, triggered by environmental heat exposure. Although pharmacological intervention is typically unnecessary, he had been using calamine lotion that

helps in intermittent symptomatic relief. He was also using Beclomethasone, Tretinoin Cream but only mild improvement has been reported. Despite the benign nature of the condition, the recurrence led to significant psychosocial impact, including low self-esteem and emotional distress to the patient. This case highlights the importance of recognizing atypical presentations of MC in adolescents and addressing both physical symptom and emotional wellbeing is essential to improve the treatment outcome.

**Keywords:** *Miliaria Crystallina*, Eccrine Miliaria, Sweat Gland, Psychological, Beclomethasone, Tretinoin, Cream.

## **Introduction**

Miliaria also known as eccrine miliaria is a skin disorder caused by the occlusion of eccrine ducts and sweat glands.<sup>[1]</sup> Crystallina is one of the subtypes of miliaria clinically characterized by the formation of tiny fragile clear vesicles filled with fluid results from the backflow of the sweat into the epidermis and dermis due to the obstruction of the sweat gland in the superficial layer of the epidermis, specifically the stratum corneum.<sup>[2]</sup> It is considered as non-erythematous.<sup>[1]</sup> Incidence were higher in the neonates especially at 2 weeks of age or younger. Rarely it will also occur in the adults.<sup>[3]</sup> Exposure to High temperature, heat and humidity are the main causes of Miliaria Crystallina (MC).<sup>[4]</sup> It appears as superficial vesicles of 1 to 2 mm which resembles as a water droplet on the affected area and it can be easily rupture.<sup>[1]</sup> It is expected to self-resolve without any /pharmacological intervention.<sup>[5]</sup> But corticosteroid creams or lotions will be prescribed for the symptomatic relief in some patients.<sup>[6]</sup>

## Case Study

A 16-year-old male patient presented with the complaint of recurrent vesicular skin lesions over his hands and face for the previous three years, when he arrived at the dermatology outpatient department. The lesions were characterized as tiny, transparent, fluid-filled blisters that were dispersed throughout the affected regions which is shown in the figure 1.



Figure 1: Multiple superficial clear vesicles over the facial region consistent with *Miliaria Crystallina*

The patient also stated that he is experiencing Lack of perspiration (anhidrosis), Intolerance to heat, exacerbation in hot weather

Patient had a medication history of using Calamine lotion which provides short-term relief for ten to twenty days. But symptoms gradually worsen within ten days of stopping the lotion

The mild initial presentation developed into severe vesicular eruptions, and the recurrence pattern was consistent.

There was:

No prior traumatic experiences

Absence of systemic symptoms

No family members with a comparable illness

No known genetic disorders.

For almost two years, the patient had been consistently using calamine lotion (Calosoft-AF), which provided short-term symptom relief.

At present consultation, he was prescribed:

- Beclomethasone dipropionate lotion
- Tretinoin cream

On follow-up after one week, there was mild clinical improvement.

The patient also reported considerable psychological distress, including:

- Social avoidance
- Anxiety
- Reduced self-confidence due to facial involvement

## **Discussion**

Miliaria crystallina, also referred to as sudamina, commonly affects neonates, with the highest incidence seen in infants under two weeks of age. It is estimated to affect around 4.5% to 9% of neonates [7-9]. However, it can also occur in older children and adults, especially after sudden exposure to warmer climates or excessive heat [10]. This is a mechanical problem due to the blockage of the sweat gland. Eccrine gland is an exocrine gland which is responsible for carrying sweat to the skin's surface. In this case, the patient exhibited heat intolerance and absence of sweating, likely due to sweat duct obstruction. While the condition was not associated with significant physical complications, the patient experienced irritation and psychosocial distress, particularly social hesitation and low self-esteem, leading to emotional disturbances such as depression and reduced self-confidence.

## Anatomical Structure of the Skin Showing Eccrine and Apocrine Sweat Glands with Ductal Openings to the Skin Surface

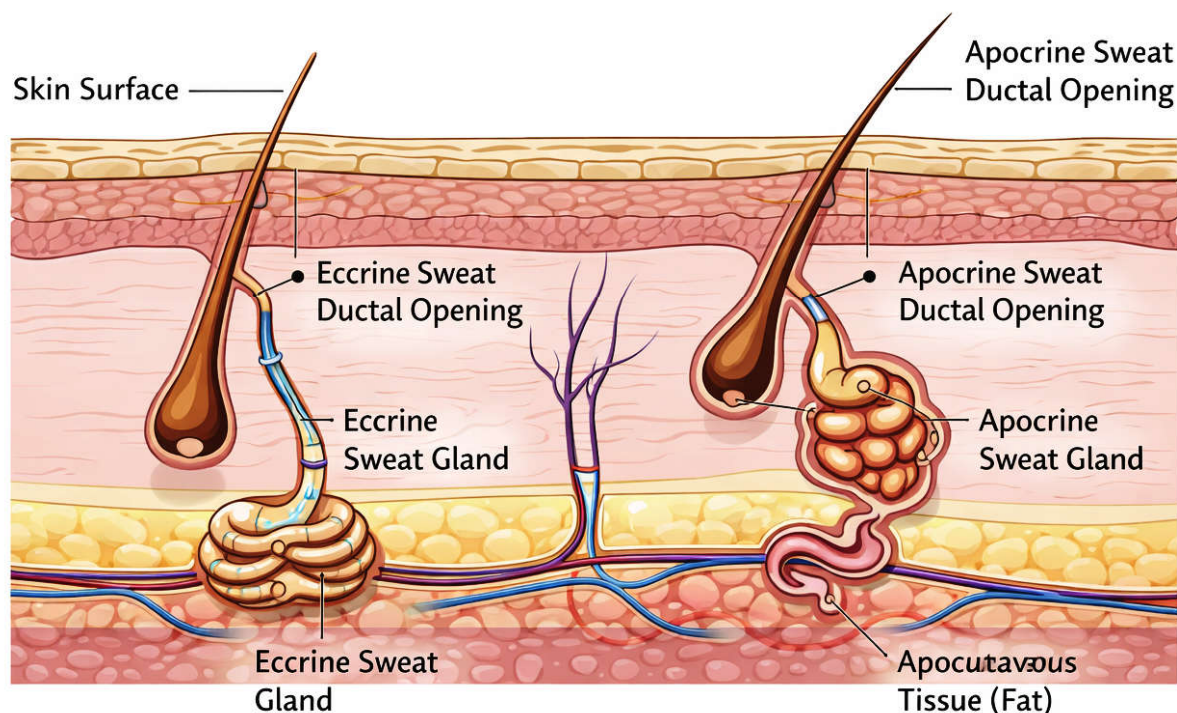


Figure 2: Anatomical Structure of the Skin Showing Eccrine and Apocrine Sweat Glands with Ductal Openings to the Skin Surface

Compared to other documented cases especially among neonates this patient experienced milder complications, possibly due to his older age and the relatively lower severity of symptoms although it is the minor condition its psychological impact should not be underestimated [7,8] Studies in psychodermatology have shown that even asymptomatic lesions may lead to anxiety, social withdrawal, or depressive symptoms, particularly in sensitive individuals.

### Conclusion

This case highlights the importance of recognizing atypical presentations of MC in adolescents and addressing both physical symptom and emotional wellbeing is essential to improve the treatment outcome. Patient education and mental health support should be the part of the management plan.

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