

Pool Palm Syndrome (Case Report)

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Abstract

Case Report

Pool palm syndrome is a rare dermatological condition associated with prolonged exposure to the rough surfaces of swimming pools. It is frequently observed in children and clinically presented as a shiny, erythematous-violaceous macules or plaques on the fingertips. The mechanism involves mechanical friction and repeated exposure to chlorinated water, leading to irritation and hyperkeratosis of the epidermis. Differential diagnoses include contact dermatitis, friction calluses and juvenile palmar dermatitis. Treatment consists mainly of avoiding rough surfaces, moisturizing the skin and applying emollients to treat symptoms. Educating parents and lifeguards is essential to prevent this condition. Here we present two cases of Pool Palm Syndrome in a 6-year-old girl and a 14-year-old girl.

Keywords: Pool Palm Syndrome, pediatric dermatology, friction-induced skin conditions, swimming-related dermatosis, case report.

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INTRODUCTION

Pool palm syndrome is a benign, unreported skin condition affecting areas of the hands and feet exposed to repeated contact with the rough surfaces of pool edges or bottoms. [1-5]. Many cases have been identified at a more or less advanced stage.

It presents certain symptoms such as itching, burning or the appearance of bumps on the skin. Diagnosis is clinical and requires no further investigation. It is a stressful condition for the parents and it may be confused with alarming diseases such as infections or contact dermatitis. Here is two cases of Pool palm syndrome.

CLINICAL CASES

Case 1:

A 6-year-old girl presented to our dermatology department with tenderness and scaling of the skin on both palms after swimming. Her parents reported that she had spent several hours clinging to the pool steps and walls while learning to swim. There was neither fever nor contact with supposed allergens.

Dermatological examination revealed erythematous plaques with superficial scaling and mild discomfort on palpation. The diagnosis of Pool Palm Syndrome was made. The child was treated with moisturizers and advised to reduce exposure to friction. Symptoms improved within 10 days with supportive care.

Case 2:

A 14-year-old girl presented with erythema, pain and skin thickening on both palms. She had recently spent many hours in a swimming pool, frequently clinging to the rough walls and bottom of the pool while playing. Dermatological examination revealed diffuse erythema on the palms of both hands and on the fingers, poorly limited and sensitive, which had appeared in less than 24 hours. Anamnesis revealed that she had been swimming in a pool for two (02) days, had not handled irritant or allergenic products, and showed no systemic signs of respiratory infection. A clinical diagnosis of palm syndrome was made. The patient was advised to avoid direct contact with the rough pool surfaces, use protective gloves and apply emollients. Symptoms completely disappeared within two weeks, thanks to conservative management.

Figures:

Figure 1: Swimming flippers: Redness and edema on fingers palmar part of a 6-year-old girl



Figure 2: Pool palm. Bright erythematous plaques on the fingertips of both hands and on the palms of a 14-year-old girl

DISCUSSION

Swimming pool palm syndrome also known as juvenile swimming pool palm dermatitis, or simply “swimming pool palms”, is an irritant contact dermatitis caused by continuous rubbing of wet fingers against the rough surfaces of swimming pools [1-3]. is an uncommon but benign condition, seen mainly in children who frequently engage in activities involving prolonged hand contact with the rough surfaces of swimming pools.

It is probably an under-diagnosed entity, with very few references in the literature [2-7]. The higher incidence of this condition in children can be explained by several factors: fragility of the skin during childhood, number of sports and leisure activities that children take part in at swimming pools and hyperhydration of the skin's stratum corneum, secondary to prolonged swimming [2, 3].

Clinically, it is characterized by the appearance of shiny, asymptomatic, erythematous-violaceous macules or plaques on the fingertips [1-3]. More rarely, the more prominent areas of the palm of the hand or the soles of the feet may be affected. Blisters may sometimes appear on these lesions [1, 7].

The appearance of the lesions and their association with aquatic activities in swimming pools make the diagnosis straightforward, with no need for further examination [1-3].

Differential diagnosis must include allergic contact dermatitis (ACD) and atopic pulpitis. ACD usually appears more on the backs of the hands, and is not related to the amount of exposure, but to sensitization. In the case of atopic pulpitis, patients have usually had other atopic signs or symptoms beforehand.

Treatment is based on cessation of activities in swimming pool and if necessary an application of moisturizing. Our cases improved with moisturizing and emollient creams and were advised to reduce their exposure to friction and use protective gloves.

CONCLUSION

Early detection and preventive strategies, such as wearing protective gloves and skin care, can help alleviate symptoms and prevent recurrences. Increased awareness among healthcare professionals and caregivers is essential for the correct identification and management of this under-appreciated dermatological condition.

Conflicts of interest: The authors declare no conflicts of interest.

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