Aquagenic Syringeal Acrokeratoderma: Report of a Case with Dermoscopic Findings

Bengu Cevirgen Cemil, Muzeyyen Gonul, Aysun Gokce, Goknur Bilen

From the Departments of Dermatology and Pathology, University of Health Sciences, Diskapi Yildirim Beyazit Training and Research Hospital, Ankara, Turkey.
E-mail: dbcemil@yahoo.com

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Sir,

Aquagenic syringeal acrokeratoderma (ASA) is a rare disorder that is characterized by symmetrical, edematous, white and translucent papules and plaques. It develops after brief exposure to water. The diagnosis of ASA is generally made based on patient’s history, clinical and histopathological examination.[1] Dermoscopic findings of ASA have been reported in only two cases previously.[2,3] We report ASA in a teenage girl with dermoscopic features.

A 15-year-old girl presented with a 1-year history of asymptomatic, symmetrical, and white lesions located on her palms. These lesions occurred within minutes of exposure to water or sweat and resolved within 20 min after drying her hands. The patient also reported hyperhidrosis of the palms. On dermatological examination, her palms were macerated, when she soaked her hands in water for several minutes, small white papules coalescing into plaques appeared [Figure 1]. She had no history of drug use, contact, or atopic diathesis. On dermoscopic examination, sweat duct pores became larger when compared with a normal-appearing area on the thenar region [Figure 2a]. Furthermore, tripe-like structures were seen on involved areas [Figure 2b]. After immersion in water, a punch biopsy was performed on the right palm. Histopathologic examination revealed hyperkeratosis, acanthosis, and dilatation of the eccrine ducts in the epidermis [Figure 3]. Based on the clinical, dermoscopic, and histopathological findings, we made the diagnosis of ASA. Her symptoms were regressed by 19% aluminum hydroxycarbonate cream application for 3 months.

The exact pathogenesis of ASA remains unclear. Several hypotheses have been proposed to explain the pathogenesis - structural or functional defects of stratum corneum during adolescence, primary disease of the sweat ducts, increased sodium concentration in the skin, thereby increasing the water-retention capacity of stratum corneum or a reaction to drugs such as rofecoxib, celecoxib, and aspirin.[4,5] The reported associations included cystic fibrosis (CF), asthma, allergic rhinitis, urticaria, palmar erythema, and malignant melanoma.[6] In our patient, she had no history of CF, so we did not perform sweat chloride test. Palmar/plantar hyperhidrosis has also been described in a subset of cases with ASA.[2] In our patient, there was no associated disorder except palmar hyperhidrosis.

Treatment modalities include 20% aluminum chloride solution, botulinum toxin injections, iontophoresis, antihistamines, pomade containing 5% salicylic acid, a mixture of mometasone furoate and petroleum jelly, and a cream containing 20% urea.[1,4] Our patient used 19% aluminum hydroxycarbonate cream for 3 months. Her lesions regressed after 3 months, but when she stopped the use of the cream her symptoms recurred.

Dermatoscopic features of the lesion have been defined in two previous reports as per our knowledge.[2,3] In these reports, comparison of marked enlargements of the sweat duct puncta and unaffected palmar regions were demonstrated by dermoscope. These findings reflect the
Correspondences

Our dermoscopic findings were compatible with these reports. In addition, whitish, pebbly, papular thickening of the palms was seen on dermoscopic examination. We refer to this finding as tripe-like structure because of similarity of tripe.

The diagnosis of ASA is generally made based on patient’s history and clinical examination. We propose dermoscopy of ASA to assist in the diagnosis of the disease, by highlighting the enlargements of sweat duct puncta.

ASA is known as a rare disorder, but it may be more frequent than thought. Dermoscopy, noninvasive, easy and useful method, may provide a rapid and accurate diagnosis of unnoticed ASA.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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