OLGU SUNUMU CASE REPORT

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Early-Onset Chromhidrosis in an Infant: Case Report

Bir Bebekte Erken Başlangıçlı Kromhidroz Olgusu

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ABSTRACT Chromhidrosis is the production of colored sweat by eccrine or apocrine sweat glands. The color results from lipofuscin pigment, and the disease can involve sweat glands in the axillae, neck or areola. The color of apocrine sweat may be brown, yellow, green, blue or black. Diagnosis of this rare and idiopathic disease is based on clinical features and skin biopsy is not necessary in all cases. If the diagnosis is questinable biopsy recommended. There is no specific therapy. Although treatment may not be necessary in some cases, capsaicin cream and botulinum toxin have been successfully used to treat patients. There have been very few reports of chromhidrosis in the pediatric age group. We report a 4 month old girl with this rare dermatological disorder. Because of our patient is one of the reported youngest cases, we think that our case is important and contribute to the literature.

Keywords: Apocrine glands; sweat gland diseases

ÖZET Kromhidroz ekrin veya apokrin ter bezleri tarafından renkli ter üretimidir. Renk lipofuskin pigmentinden kaynaklanır ve hastalık aksilla, boyun ve areoladaki ter bezlerini içerir. Kahverengi, sarı, yeşil, mavi veya siyah renkli ter olabilir. Bu nadir ve idiopatik hastalığın tanısı klinik bulgulara dayanır. Cilt biyopsisi tüm vakalarda gerekli değildir ancak tanı şüpheli ise önerilir. Spesifik tedavisi yoktur. Tedavide kapsaisin krem veya botulinum toksininin başarıyla kullanıldığı vakalar mevcuttur. Çocuk yaş grubunda rapor edilmiş az sayıda kromhidroz vakası bulunmaktadır. Biz burada 4 aylık olgudaki bu nadir dermatolojik bozukluğu sunduk. Olgumuzun bildirilen en genç vakalardan biri olması nedeniyle önem taşıdığını ve literatüre katkı sağlayacağını düşünmekteyiz.

Anahtar Kelimeler: Apokrin bezler; ter bezi hastalıkları

Chromhidrosis is a very rare idiopathic disorder of the eccrine or apocrine sweat glands characterized by yellow, blue, green or black pigmented secretions.[1] The etiology of this rare condition often is unknown and the clinical presentation can vary. The color results from lipofuscin pigment. Lipofuscin is a yellow pigment that is not specific to apocrine glands. The disease involve sweat glands in the axilla, neck or areola. It is a chronic disorder and usually begins during puberty and may slowly regress with age. Diagnosis is based on clinical features; skin biopsy is not necessary fort he diagnosis and there is no specific therapy.

CASE REPORT

A 4-month-old girl presented with a history of staining of her undershirt, especially the axillary region. This coloration noted by parents for last two month. She was born after a normal pregnancy from non-consanguineous parents. She had no history of drug use, illness, trauma, eating different food and heavy metal contact. She was fed with brest milk. On physical examination it was noticed that her undershirt was bluish colored (Figure 1). The rest of the physical examination was normal. Routine laboratory investigations such as blood count, renal function tests and other biochemical tests, coagulation tests, iron panel, ferritin levels were normal. Urinary homogentisic acid level was within normal limits. Microbiological examination of her skin revealed normal skin flora. Clinical diagnosis was established. Skin biopsy, serum chromium and urinary copper was not performed.

FIGURE 1: Patient's blue-stained undershirt.

DISCUSSION

Chromhidrosis refers to secretion of colored sweat and was first reported in 1709 by Yonge of Plymouth.[2] It has been classified into apocrine, pseudo-eccrine, and true eccrine chromhidrosis. Apocrine chromhidrosis refers to the secretion of colored sweat. Apocrine sweat glands are located in the axillae, anogenital skin, areolae and over the skin of the trunk, face and scalp. The color of chromhidrosis may be yellow, green, blue, brown or black, depending on the level of oxidation of lipofuscin secreted in sweat.[3] Our patient's sweat color was blue. Darker colors are due to higher states of oxidation. The chromhidrotic apocrine glands have elevated levels of lipofuscins that cannot be explained by dietary or metabolic alterations. However it was seen that the chromhidrosis of our case was recognized after the addition of complementary food to her diet. This condition might be a coincidence. Sex, occupation, season and climate have no influence on chromhidrosis.[4] Pseudo-eccrine chromhidrosis is production of colorless sweat that becomes colored when it reaches the skin and reacts with agents such as chromogenic bacterial products, chemicals, paints, or dyes.[5] True eccrine chromhidrosis is a very rare condition, occurring through eccrine excretion of water-soluble agents like dyes and drugs.[6] It is not associated with any known systemic disorders. The differential diagnosis includes hyperbilirubinemia, pseudomonas infection, bleeding diathesis, alkaptonuria and poisoning.[4]

Chromhidrosis persists throughout life, but slow regression of the disease is noted, as apocrine glands regress with time. Apocrine chromhidrosis has no satisfactory treatment. Temporary, successful treatments of apocrine chromhidrosis with capsaicin cream and botulinum toxin were reported.[7] We did not apply any treatment modality because of the young age.

In conclusion, although apocrine chromhidrosis may develop at any age, it is more often after puberty. The age of the patients reported in the literature range from 40 days to 76 years.[7] Yöntem et al. reported four patients with apocrine chromhidrosis from Turkey.[8] One of these patient was 40 day old and the youngest reported patient. Our patient was chromhidrotic from 2 months and to the best of our knowledge, our case one of the youngest cases in the literature.

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Conflict of Interest

Authors declared no conflict of interest or financial support.

Authorship Contributions

Concept: *Nagehan Aslan, Ahmet Rıfat Örmeci;* ***Design:*** *Nagehan Aslan, Vahide Baysal Akkaya;* ***Supervision:*** *Nagehan Aslan, Tuğba Koca, Ahmet Rıfat Örmeci;* ***Funding:*** *Nagehan Aslan, Ahmet Rıfat Örmeci, Tuğba Koca;* ***Materials:*** *Nagehan Aslan;* ***Data Collection and/or Processing:*** *Nagehan Aslan, Vahide Baysal Akkaya, Tuğba Koca;* ***Analysis and/or Interpretation:*** *Nagehan Aslan, Tuğba Koca;* ***Literature Review:*** *Nagehan Aslan, Ahmet Rıfat Örmeci;* ***Writing:*** *Nagehan Aslan;* ***Critical Review:*** *Ahmet Rıfat Örmeci, Nagehan Aslan, Vahide Baysal Akkaya.*

REFERENCES

1. Balasubramanian S, Amperayani S, Dhanalakshmi K, Kumar R. Chromhidrosis--colored sweat in a toddler. Indian Pediatr 2015;52(4):337-8.
2. Shelley WB, Hurley HJ Jr. Localized chromhidrosis: a survey. AMA Arch Derm Syphilol 1954; 69(4):449-71.
3. Carman KB, Aydogdu SD, Sabuncu I, Yarar C, Yakut A, Oztelcan B. Infant with chromhidrosis. Pediatr Int 2011;53(2): 283-4.
4. Griffith JR. Isolated areolar apocrine chromhidrosis. Pediatrics 2005;115(2):e239-41.
5. Leite RM, Nery NS. Dermatitis simulata: the mystery of the blue girl. Int J Dermatol 2007;46(12):1317-9.
6. Cilliers J, de Beer C. The case of the red lingerie-chromhidrosis revisited. Dermatology 1999;199(2):149-52.
7. Wu JM, Mamelak AJ, Nussbaum R, McElgunn PS. Botulinum toxin a in the treatment of chromhidrosis. Dermatol Surg 2005;31(8 Pt 1):963-5.
8. Yöntem A, Kör D, Hızlı-Karabacak B, Karakaş M, Önenli-Mungan N. Blue-colored sweating: four infants with apocrine chromhidrosis. Turk J Pediatr 2015;57(3):290-3.