

A Case of Late-Onset Chromhidrosis

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Received April 5, 2016; Accepted April 18, 2016; Published May 30, 2016

TO THE EDITOR,

Apocrine chromhidrosis is a rare disease characterized by the secretion of colored sweat. Patients complain of discoloration of underclothes. Apocrine chromhidrosis occurring aged people is rare. We describe a rare case of late-onset of apocrine chromhidrosis.

A 70-year-old male visited our hospital, complaining of blue staining of the towels after wiping the sweat, which he noticed 10 months ago. He had past histories of lung squamous cell carcinoma, paroxysmal atrial fibrillation, hypertension, hyperlipidemia, emphysema, reflux esophagitis, cerebral infarction, and bronchial asthma. He was taking many drugs for over 5 years, such as prednisolone, nifedipine, clotiazepam, olmesartan medoxomil, esomeprazole magnesium hydrate, cibenzoline succinate, dabigatran etexilate methanesulfonate, fluvastatin sodium, and montelukast sodium. He brought a towel wiping his axilla, which was turned to pale blue (**Figure 1**). Dermatological examination revealed normal skin appearance. He denied hyperhidrosis and seasonal alteration. Results of laboratory examination including complete blood count, and liver and kidney functions were normal. He denied occupational and environmental changes in recent years. He did not want biopsy. Based on the clinical examination, we diagnosed this case as apocrine chromhidrosis.

Apocrine chromhidrosis targets the axilla, face and areola. Secretion of colored sweat, such as yellow, blue, green, or black, has been reported, which depends on the levels of oxidation of lipofuscin secreted in apocrine glands [1]. Also, trypsin, melanin, and haeme breakdown products have been implicated as possible color-producing molecules. Also, substance P is implicated as a possible pathogenic factor, because the application of topical capsaicin reduced chromhidrosis [2]. By contrast, pseudo-ecrine chromhidrosis is production of colorless sweat which turned

colored when it reached the skin and reacts with chromogenic bacterial products, chemicals, paints, and dyes [3]. True eccrine chromhidrosis is exceedingly rare, and conditions are induced by eccrine secretion of water-soluble agents such as dyes and drugs, without systemic diseases. The patient was previously treated with antibiotics (clarithromycin) for his emphysema, however, colored staining was unchanged. Also, he does not contact with chemicals, paints, or dyes in his occupation or hobbies. Nor he did use perfume. Therefore, we denied pseudo-ecrine chromhidrosis.

In the majority of cases, apocrine chromhidrosis occur in puberty. Cases of either pediatric or elderly onset are few. To date, apocrine chromhidrosis in elderly persons have been reported in only a few cases, which occurred at the ages of 60, 62, and 76 years old [4-6]. Our patient belongs to the cases with late-onset of chromhidrosis. The reason of late-onset of chromhidrosis is unknown; however, tartrazine coating of bisacodyl, a purgative, has been suggested to be causative for eccrine chromhidrosis [7]. In our case, the patient had taken various kinds of drugs, which however were unchanged for over 5 years. Therefore, we consider that the association of drugs are unlikely to play a causative role in the induction of chromhidrosis in our case.

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Citation: Mori T & Yamamoto T. (2016) A Case of Late-Onset Chromhidrosis. *Dermatol Clin Res* 2(2): 93-94.

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Figure 1. Blue stained towels after wiping the sweat (right side). Left side is the towel before wiping.

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