

## Concomitant Hidradenitis Suppurativa and Eruptive Xanthomas Presenting with Phimosis – The Importance of Timely Diagnosis

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**ABSTRACT** A 49-year-old man diagnosed with metabolic syndrome (MetS) was referred to us for treatment of xanthoma elements. Physical examination revealed widespread confluent yellow firm papules on his fingers, toes, arms, legs, and back. The diagnosis of eruptive xanthoma (EX) was clinically confirmed. During the examination of scar tissues, tombstone comedones and an inflammatory nodule was noted on his abdominal folds and right groin. These are diagnostic signs of hidradenitis suppurativa (HS), a condition the patient had reportedly suffered for 15 years without being diagnosed. The patient's HS nodule was treated with intralesional triamcinolone injection, and prophylactic resorcinol was initiated, and he was referred to endocrinologists for xanthoma management. Three weeks later he returned due to newly developed lesions on his preputium, which caused a painful phimosis. Both HS and EX are correlated with MetS and causes increased all-cause cardiovascular mortality. As the average diagnostic delay of HS is 7.2 years, it is likely that timely diagnosis of HS would have identified the patient as being at risk of developing MetS. With proper preventive measures, the resulting EX lesions and increase in cardiac mortality could have been avoided.

**KEY WORDS:** hidradenitis suppurativa, eruptive xanthoma, phimosis, case report, hypertriglyceridemia

### CASE REPORT

A 49-year-old man with undiagnosed hidradenitis suppurativa (HS) was referred to our department for treatment of xanthoma elements. He was previously diagnosed with hypertension, hyperlipidemia, diabetes, polyneuropathy, and chronic obstructive pulmonary disease.

At the time of referral, the patient had been complaining of painful lesions for more than a year, and physical evaluation revealed widespread classic confluent yellow firm papules on the fingers, toes, arms,

legs, and back (Figure 1). The diagnosis of eruptive xanthoma (EX) was clinically and histologically confirmed. The medical treatment included insulin/insulin-analogs, metformin, GLP-1 receptor agonist, ACE-inhibitor, and gemfibrozil (non-statin cholesterol-reducing drug), but compliance was sub-optimal. The patient claimed an achieved weight-loss of 25 kg, despite the fact that his most recent physician-measured BMI was 30.9. Relevant blood test results (Table 1) were also higher than expected.

**Table 1.** Relevant blood tests performed during treatment

Test	Value during initial consultation	Value upon discharge from admittance	Normal range
Plasma glucose	19 mmol/L	15.8 mmol/L	5.4-7.3 mmol/L
HgB1Ac	125 mmol/mol	118 mmol/mol	<48 mmol/mol
Cholesterol	>15 mmol/L	8.1 mmol/L	<5.0 mmol/L
Triglyceride	>45.2 mmol/L	29 mmol/L	0.5-2.6 mmol/L

At presentation, the patient was referred to the endocrinology department for hyperlipidemia treatment optimization.

Three weeks later, the patient developed new lesions on his preputium, with the resulting dermal swelling of the skin causing a painful phimosis. His general physician had treated the lesions with lidocaine injections without effect. Examination revealed yellow plaques on his preputium (Figure 2, a), clinically compatible with xanthoma. During the examination, clinical signs in the form of scar tissues, tombstone comedones, and an inflammatory nodule were noted on the patient's abdominal folds and right groin (Figure 2, b and c). These lesions were clinically diagnostic for HS. The patient afterwards reported that he had suffered these symptoms for 15 years without being diagnosed. The HS nodule was treated with triamcinolone injection, and resorcinol ointment was prescribed for daily use in the area. The phimosis was deemed a result of EX and was treated via circumcision – the surgeon did not request pathologic examination of the foreskin. Hyperlipidemia and dysregulated diabetes were treated during a one-week hospital admission. Tresiba 50 IE BID combined with metformin 500 mg BID and gemfibrozil 600 mg BID were re-initiated with good effect (Table 1).

HS is a chronic inflammatory skin disease where plugging of the pilosebaceous unit leads to the formation of recurrent inflamed nodular lesions which



**Figure 1.** Initial consultation: eruptive xanthoma findings during the physical examination. (a) Widespread classic confluent yellow firm papules on the fingers, arms, and back. (b) Close-up of the left elbow, where the patient reported the most pain.

may progress to scars and sinus tracts (tunnels) via abscess formation (1,2). HS has an estimated population prevalence of around 1% (3), and is highly associated with metabolic syndrome (MetS), disorders of the lipoprotein metabolism, diabetes, and obesity (4). All these symptoms or diseases were present in our patient. The average diagnostic delay for HS is 7.2 years (5), which may partly explain why, despite showing scars and classic HS signs during the physical examination, our patient had never been previously diagnosed with HS. His mild HS phenotype could be another explanation.

MetS is also associated with EX, a disease caused by severe hypertriglyceridemia (>10 mmol/L) (6). EX affects about 0.1% of the population and consist of localized infiltrates of lipid-containing foam-cells that manifest on the skin as yellowish papules on extensor surfaces of the extremities but may also appear on the trunk and buttocks (7).



**Figure 2.** Secondary consultation: findings during the second physical examination. (a) Yellow plaques forming a ring-like structure on the patient's preputium resulting in phimosis. (b) and (c) An inflamed nodule located at the right groin and sequelae from prior nodules in the form of scar tissues and tombstone comedones located in the groin and abdominal folds.

Our hypothesis is that, as our patient has suffered HS for 15 years and then either through causation or simple association developed MetS, which in turn gave rise to the formation of multiple EX elements. Had HS been diagnosed in a timely manner, the patient could have been informed of the increased risk of developing MetS, and proper preventive measures (lifestyle and medicinal) may have had spared the patient the EX manifestation and the surgery requiring phimosis as well as lowered his increased all-cause cardiovascular mortality (8,9).

#### **PATIENT CONSENT:**

The patient gave both oral and written consent for publication of medical data and the figures.

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