

## Giant Achrochordon in a Patient With Acromegaly: Case Report and Review of the Literature

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### Abstract

**Observation:** Acromegaly is a rare chronic disorder caused by overproduction of growth hormone in adulthood. Cutaneous manifestations of acromegaly are various, usually being the first presenting findings of the disease. Acrochordons are pedunculated, soft, skin coloured or hyperpigmented papules, usually of 2-5 mm in size. Giant acrochordones are rarely reported, many of them being in the vulvar and perineal area. Though acrochordones are very frequently encountered in patients with acromegaly, giant forms have not been reported previously. Here we describe an elderly male patient with acromegaly presenting a giant acrochordon located on the leg, and discuss the pathomechanisms and importance of this lesion.

### Introduction

Acromegaly is a rare chronic disorder caused by overproduction of growth hormone (GH) in adulthood. It affects cutaneous, endocrine, cardiovascular, skeletal, and respiratory systems [1]. Cutaneous manifestations of acromegaly are various, usually being the first presenting findings of the disease [2]. Here we describe a newly diagnosed patient with acromegaly presenting a giant acrochordon.

### Case Report

A 68-year-old man referred to Endocrinology outpatient clinic for increased body weight, sleep apnea, and elevated blood sugar. The patient and his family had noticed alteration of facial appearance,

and enlargement of hands and feet in recent years. Physical examination showed coarse facial contour and texture, prognathism, marked lower lip and large hands and feet. Dermatological examination revealed facial seborrhea, dilated follicular orifices, generalized hyperhidrosis, prominent skin furrowing on forehead resembling cutis verticis gyrata, deep nasolabial folds, multiple skin tags (Figure 1) and seborrheic keratoses over the face, neck, axillary vaults, and upper chest, multiple cherry angiomas, knuckle pads of the hands, and a lipoma of 2x2 cm in diameter, on the back. The most striking of all was a huge pedunculated fleshy mass located over the posterior right thigh, which was told to be present for 5 years, and rapidly grown during the last 2 years. The lesion was 6.5x4.0x1.5 cm in size, and the pedicle was 1.5x0.9x0.6 cm. It was a nontender, soft, pink, bag-like lesion with smooth, and lobulated surface



**Figure 1.** Multiple hyperpigmented skin tags scattered over the neck and upper chest



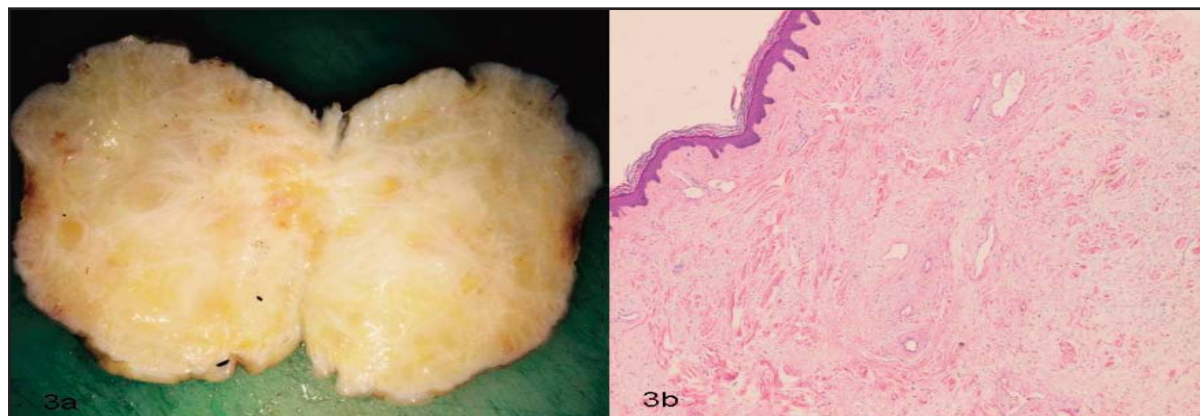
**Figures 2a and b.** a. Giant acrochordon located on the popliteal fossa, b. Closer view of the lesion demonstrating lobular and papillomatous surface with gyrate furrows

**(Figures 2a and b).** The mass was diagnosed as acrochordon due to its pedunculated attachment, soft consistency and free mobility. The rest of the physical examination was normal.

Complete blood cell count, urinalysis, erythrocyte sedimentation rate, serum DHEAS, TSH, and fT4 levels were normal. Blood biochemistry were within normal limits except fasting blood glucose 151 mg/dl and HbA1c 6.9% (N: 4-6). Serum prolactin was 34.83 ng/mL (N: 3.46-19.4), and IGF-1 was 663.44 ng/mL (N: 78-258). Hipophysis magnetic resonance imaging disclosed a macroadenoma fil-

ling the sellae and extending to the suprasellar cystem.

The giant acrochordon was totally excised. Examination of the macroscopic sections revealed a soft tissue mass, mottled with yellowish-dirty white coloured material (**Figure 3a**). Histopathologic examination showed a polypoid tissue with epidermal hyperkeratosis, irregular acanthosis and slight papillomatosis overlying fibrosis, elastosis, vascular spaces, and scant inflammatory cells. No malignant cells were seen (**Figure 3b**).



**Figures 3a and b.** a. Vertical section of the excised tumor revealing yellowish areas on a homogenous or reticular off-white surface, b. Ortho-hyperkeratosis, slight irregular acanthosis and papillomatosis, dermal fibrosis, elastosis, dilated vessels, and irregular collagen bands. H&E, x100

## Discussion

Acromegaly is a rare disease characterized by overgrowth of soft tissues and bones in adulthood, which results from the overproduction of growth hormone (GH) [1]. In most cases excess of GH is caused by GH-releasing pituitary adenoma. GH effects are mediated mainly by the insulin-like growth factor 1 (IGF-1), which is produced primarily by the liver. IGF-1 receptors are found on both the keratinocytes and fibroblasts. Owing to the roles of IGF-1 in the proliferation and differentiation of skin cells, acromegalic patients show epidermal hyperplasia and increased dermal glycosaminoglycans with attendant retention of water, that leads to puffy, thick skin of the face, hands and feet. In addition, patients usually have oily skin, hypertrichosis, and hyperhidrosis, due to the effects of IGF-1 on adnexa [1, 2, 3, 4].

Acrochordons, also called skin tags, soft fibroma, molluscum pendulum, or fibroepithelial polyps, are common benign connective tissue tumors of the dermis, seen in nearly half of the general population. They mostly develop in adults, usually after the third decade [5]. The relations of acrochordons with impaired glucose tolerance, obesity, dyslipidemia, and colonic adenomatous polyps have been reported, though the exact pathomechanism of the latter is unclear yet [6, 7]. Acrochordons occur as pedunculated, soft, skin coloured or hyperpigmented papules, and are most commonly located on the neck, axillae, groin and eyelids. Microscopically they show

a central fibrovascular core with variably loose to intense collagenous stroma and fine walled, enlarged blood vessels. They are usually small papules measuring 2-5 mm in size, however, giant forms up to 2.5 kg in weight, and 30 cm in diameter, have rarely been reported. Most of these giant lesions were located in the lower half of the body, many of them being in the vulvar and perineal area. Lymphedema, vulvar psoriasis, and obesity were associated findings in some of these cases [5, 8, 9, 10].

Among the skin findings of acromegaly, acrochordons are very frequently encountered, with rates between 25%-75%. It is not clear whether acrochordons are directly caused by the effects of excess GH and IGF-1, or appear as a result of insulin resistance and dyslipidemia associated with acromegaly [2, 3, 4].

A malign transformation rate of 0.37% has been reported for all acrochordons in overall population. It has been considered that this risk may be higher for giant lesions, especially if chronic irritation and inflammation is present [9, 11]. Thus, it has been recommended that all giant acrochordons should be excised and evaluated by histopathological examination. Furthermore, acromegalic patients present a higher risk of developing benign and malignant tumors, including those of gastrointestinal tract, breast, thyroid, and skin, compared with the general population [12]. For these reasons, we preferred total excision of the lesion.



Up to date there is not a reported case of acromegaly with giant acrochordon. We conclude that acromegaly is another disorder associated with giant acrochordons, and total excision of these lesions should be performed to avoid a malignant transformation.

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