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Case Report

# Unusual cystic lesion of the eyebrow: A case report of malignant chondroid syringoma

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ABSTRACT

*Introduction:* Malignant chondroid syringomas, also known as cutaneous malignant mixed tumors, are rare neoplasms that most frequently occur on the torso or extremities of women. Here, we present an illustrated case of a facial malignant chondroid syringoma.
*Materials and methods:* A 32-year-old female patient with no notable medical history presented with an approximately 1 cm-wide, painless, palpably-mobile subcutaneous nodule, suggestive of a sebaceous cyst, just above the middle third of the right eyebrow. The nodule had grown steadily over six months. She had no palpable cervical lymphadenopathies.
*Results:* Anatomic pathology of the enucleated nodule found an adnexal sudoriparous tumor measuring 6 × 10 mm and indicative of a malignant chondroid syringoma. Cervicofacial computed tomography and positron emission tomography scans showed no near or distant lymph node involvement. A second intervention for wide excision around the original enucleation lesion (+1 cm) was validated in a multidisciplinary, cancerology-dermatology consultation. The eyebrow was reconstructed with a temporally-harvested fasciocutaneous island flap.
*Discussion:* Malignant chondroid syringomas are very rare and thus no standardized treatment has been established for them. Only 12 craniofacial localizations have been described to date. Radiation therapy and chemotherapy have not been shown effective for this malignancy, leaving only wide excision as a therapeutic option. A high and sustained (as much as 20 years after the initial diagnosis) risk of recurrence or metastasis necessitates prolonged patient follow-up.


## 1. Introduction

Chondroid syringomas, also known as cutaneous mixed tumors, are rare neoplasms involving the sweat glands. They were originally described by Billroth in 1859 but given their current appellation by Hirsch and Helwig in 1961 [1].

Benign chondroid syringomas have a good prognosis and tend to appear as a cervicofacial (nose, upper lip, eyebrow), painlessly-evolving nodule in adult men.

Malignant chondroid syringomas are rarer still, and, in contrast to the benign form, they show a preference for women and usually develop on the torso or extremities: of the approximately 50 cases reported in the literature, only 12 were situated on the head or face.

We present here what is to our knowledge the first case of a malignant chondroid syringoma occurring on the eyebrow of a young female patient.

## 2. Clinical case

A 32-year-old woman with no outstanding medical history presented with a subcutaneous nodule above the middle third of the right eyebrow (Fig. 1). The painless, palpably-mobile nodule had been growing steadily over the previous six months to reach 1 cm at the time of examination. The patient had no associated symptoms or clinically-palpable cervical lymphadenopathies. The initial diagnosis thus leaned toward a sebaceous cyst. The nodule was entirely enucleated under local anesthesia in February 2017.

Anatomic pathology (Fig. 2a and b) revealed an adnexal sudoriparous tumor measuring 10 × 6 mm. The tumor was biphasic, with an epithelial component organized in trabeculae,

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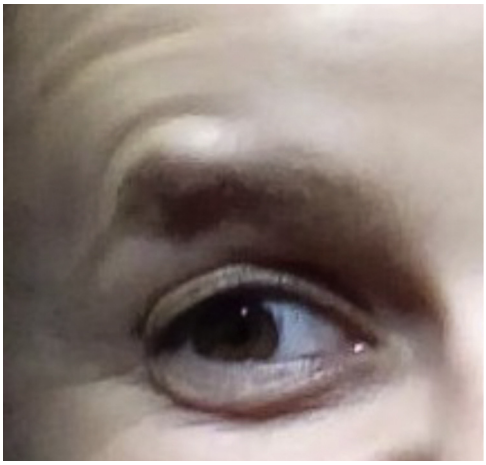

**Fig. 1.** Subcutaneous nodule on the middle-third of the right eyebrow.

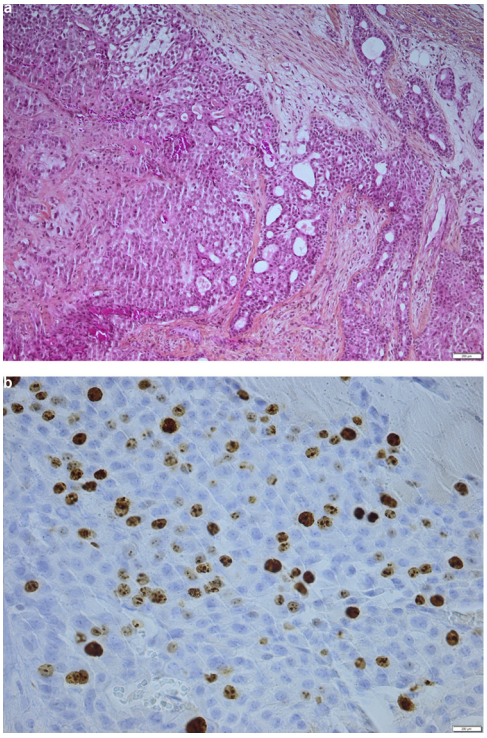

**Fig. 2.** a: optical microscopy (HES staining, 100 × magnification): tumoral masses with glandular differentiation; b: optical microscopy (400 × magnification): elevated ki67 expression indicating malignancy.

cords and occasional canaliculi, and a mesenchymal component showing chondroid and myxoid elements. The epithelial component comprised atypical cells with enlarged and/or mitotic nuclei. Furthermore, capsular invasion/infiltration was observed and, in immunohistochemistry, the Ki-67 proliferation index was elevated. The histological findings were reassessed in Paris by the anatomical pathologists of CARADERM (network for adnexal cancers), who confirmed the diagnosis of malignant chondroid syringoma.

Cervicofacial computed tomography and positron emission tomography scans done following the positive diagnosis showed no locoregional or distant lymph node involvement.

Case management as agreed upon in a multidisciplinary cancerology-dermatology consultation comprised wide excision around the original enucleation lesion (+1 cm), including the

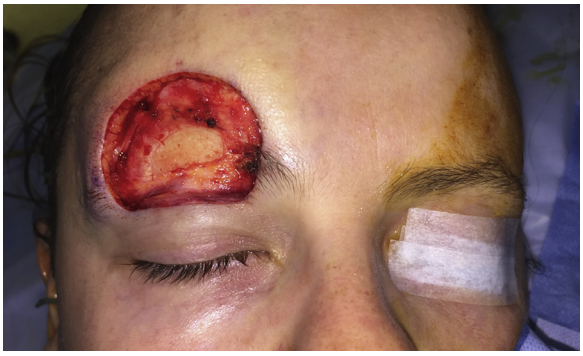

**Fig. 3.** Excision enlarged by 1 cm and extended to the bone at the base.

periosteum at the base of the excision (Fig. 3). The second surgical intervention was performed in April 2017.

The eyebrow was reconstructed with a fasciocutaneous island flap taken from the temporal scalp and pedicled by the parietal branch of the superficial temporal artery, situated beforehand by Doppler ultrasound. The dissection was performed retrogradely through the subgaleal space to the frontal branch of the superficial temporal artery, which was conserved (Fig. 4).

A tunnel was made thereafter superior to the galea aponeurotica to permit the subcutaneous passage of the flap to the receiver site. This latter was sutured in two planes with a suction drain (Manovac) in place (Fig. 5).

Once the wound had healed, the patient benefited from laser hair removal sessions to structure the eyebrow (Fig. 6a and b). Anatomic pathology of the second operative specimen found no residual tumor and no tumor recurrence has been observed as of this writing.

## 3. Discussion

Chondroid syringomas are a type of adnexal tumor involving the sweat glands. They are very rare, representing only 0.01% of skin cancers.

These neoplasms present most frequently as a non-ulcerated, slow-growing subcutaneous or intradermal nodule on the head or face (80%) of adult men [2].

Chondroid syringomas are usually benign, but malignant forms are observed, albeit with even greater rarely: only about 50 cases have been reported in the literature, and of those, only 12 were craniofacial, i.e., six on the scalp [2–6], two on the ear [7,8], one in the nasolabial region [9], one in the infraorbital region [10], one at

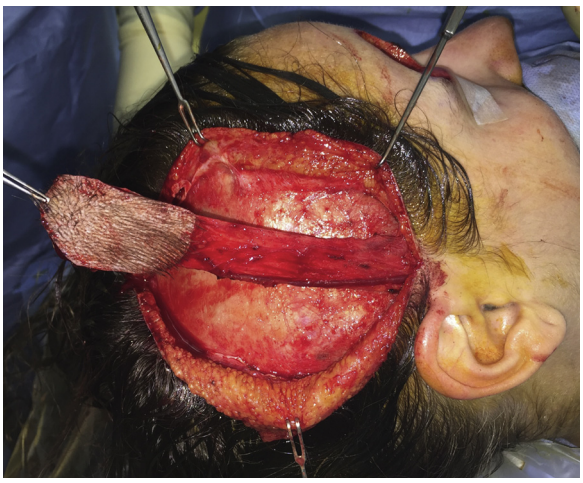

**Fig. 4.** Fasciocutaneous island flap being raised.

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