

Mushroom-Like Skin Tumours: Report of Three Cases

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Abstract

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Mushroom like the growth of skin tumour is a rare phenomenon although described already in 1806 by Alibert, who focused on mycosis fungicides. We identified only four case reports in PUBMED database using the terms "mushroom-like growth" and "skin tumour". We analysed our files and identified three elderly female patients (69 to 94 years old). Histological diagnosis was melanoma, Merkel cell carcinoma and basal cell carcinoma. All tumours could be completely removed by wide excision or delayed Mohs surgery. No metastatic spread was noted.

Introduction

Exophytic tumour growth can result in rare cases in a mushroom-like macroscopic appearance. In mycosis fungoides, this peculiar growth pattern is known at least since Alibert (1806) [1], in solid skin tumours, it is extremely rare. We present a collection of tumours from our files to illustrate this phenomenon. In most cases, the only histopathology uncovers the correct diagnosis.

Case series

The cases had been observed at the Department of Dermatology and Allergology. All tumours were subjected to histopathological analysis after complete surgical removal.

Mushroom-like melanoma

A 90-year-old woman presented with a slow-

growing exophytic malodorous, oozing tumour on her left calf. She declared that the tumour had been noticed for more than five years. Since it was asymptomatic, she did not care much about. But in the last months, the malodor brought her to the clinic.

On examination, we observed a mushroom-like brownish tumour with a moist surface, about 35 x 30 x 15 mm in size. The tumour was completely excised with a safety margin of 2 cm. The defect was closed by tissue transfer.

Histologic examination revealed an ulcerated, infiltrative, epitheloid cell tumour, sparsely pigmented, with high mitotic activity. Tumour cells were positive for S100 and MART-1. There was a moderate inflammatory infiltrate at the bottom of the lesion. The final diagnosis was nodular melanoma, Clark level IV, tumour thickness 9.0 mm (T4bN0M0, stage IIc). Distal from this lesion another tumour plaque was removed in the same session. Histologic examination confirmed the diagnosis of Bowen's disease.



Figure 1: Malignant melanoma of the calve. (a) Clinical mushroom-like appearance; (b) After surgery and defect closure

Staging did not reveal a metastatic spread. Due to the age of the patient neither adjuvant therapy nor sentinel lymph node biopsy has been performed.

Mushroom-like Merkel cell carcinoma

A 69-year-old female patient presented with a soft nodule on the tip of the nose. Tumour history was for about six months. The lesion was symptomless.

On examination, we observed a reddish, exophytic tumour mass of 14 mm in diameter with a mushroom-like appearance (Fig. 2). The tumour was completely excised by delayed Mohs surgery. Histologic investigations demonstrated a nodular dermal tumour composed of basophilic small epitheloid cells with high mitotic activity. There was no connection to the epidermis. Tumour cells were reactive for cytokeratin 20, neuron-specific enolase, synaptophysin, and chromogranin A. On staging, no metastases were noted. The diagnosis of an intermediate type Merkel cell carcinoma was confirmed, T1N0M0 (stage Ia).

After defect closure by Rieger-flap and complete healing, the patient received adjuvant radiotherapy of the tumour basin and regional lymph nodes.



Figure 2: Mushroom-like Merkel cell carcinoma of the tip of the nose

Mushroom-like basal cell carcinoma

A 94-year-old female patient presented with an asymptomatic, exophytic tumour on her right mons pubis was grown for at least five years.

On examination, we observed an exophytic tumour with a flesh-like colour and 1.5 cm in diameter (Fig. 3a). The tumour was painless. We removed the lesion by wide excision with 2 cm safety margin under the suspicion of squamous cells carcinoma or Merkel cell carcinoma. The defect was closed by tissue transfer. Staging with diagnostic ultrasound for regional lymph nodes was unremarkable. Healing was uneventful.



Figure 3: Mushroom-like appearance of a basal cell carcinoma

The histologic investigation described a polypoid, basaloid epitheloid cell tumor with partial regression clefts. It was a mixed solid and adenoid tumour type. The tumour infiltrated deep corium. A mild inflammatory mixed cell infiltrates observed around the lesion. The final diagnosis was basal cell carcinoma.

Discussion

Mushroom-like exophytic tumour growth is a rare phenomenon although it had been described at least since 1806 by Alibert in mycosis fungoides [1]. We described three elderly patients with mushroom-like tumours, melanoma, a Merkel cell carcinoma, and a basal cell carcinoma. It seems surprising that none of these patients had signs of metastatic spread. At least in the case of melanoma and Merkel cell carcinoma, metastasis is not uncommon. Maybe the advanced age of the patients is contributing to this observation.

A mushroom-like basal cell carcinoma of the nose tip had been reported in recent years by Wang et al. (2014) [2]. A mushroom-like cutaneous squamous cell carcinoma of the clear cell/signet-ring cell variant had been observed in a 78-year-old Chinese woman in the right thigh [3]. Mushroom-like

soft fibromas of the leg had been identified on chronic lymphedema [4].

In conclusion, the mushroom-like appearance of skin tumours is an exceptionally rare observation. In most cases, the final diagnosis could not be expected by clinical examination. Mushroom-like tumours need a complete surgical removal and careful, histologic examination since often they represent malignancies.

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