

Endometrial carcinoma metastatic to the scalp: a rare case report and literature review

O Carcinoma endometrial é uma causa rara de metástases cutâneas

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ABSTRACT

Endometrial carcinoma is a very rare cause of cutaneous metastasis. The most frequent presentations of cutaneous metastasis are fast developing nodules or tumors, which are evidence of widespread dissemination in such patients. We report a case of scalp metastasis from an endometrial adenocarcinoma with a fatal prognosis.

Keywords: Scalp metastasis, Cutaneous metastasis, Endometrial carcinoma.

RESUMO

O carcinoma endometrial é uma causa rara de metástases cutâneas. A apresentação mais frequente de metástases cutâneas são nódulos ou tumores de rápido desenvolvimento, que evidenciam uma disseminação generalizada nesses pacientes. Relatamos um caso de metástase no couro cabeludo de um adenocarcinoma endometrial com prognóstico fatal.

Palavras-chave: Metástase do escalpe, Metástase cutânea, Carcinoma endometrial.

INTRODUCTION

Endometrial adenocarcinoma is one of the most common gynecological tumors in postmenopausal women. ¹ The distant metastasis of this type of tumor predominantly involves lungs, liver, bones¹ and cutaneous metastasis is documented in 0.7 to 9% of all neoplasms. ²

The primary tumors most often metastasize to the cutaneous tissue are breast, colon, melanoma, and ovary. Endometrial carcinoma is a very rare cause of cutaneous metastasis, which mainly occurs due to hematogenous dissemination. ^{3,2} Metastatic lesions to the scalp may present in different forms (discrete nodules, plaques, or inflammatory lesions), they are often highly vascular and reflect disseminated disease.^{4,2} The diagnosis of cutaneous metastatic carcinoma is based

on histopathologic evaluation of the involved skin lesion.²

The cutaneous metastasis of endometrial carcinoma, including scalp metastasis, is associated with a poor prognosis and a life expectancy of approximately 3 to 6 months.⁵

The authors could only find eight cases of endometrial carcinoma metastatic to the scalp in the literature. Herein, a rare case of scalp metastasis from endometrial carcinoma is presented.

In this article, these cases are briefly described (table 1), in relation to the age of the patients, tumor type and stage, time until the appearance of cutaneous metastasis and time until the patient's death. From the anatomopathological point of view, they have in common the histological type and higher prevalence of adenocarcinomas.

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CASE REPORT

A 65-year-old patient, with no significant past medical history and BMI of 25,3 kg/m², *Gesta4 Para4*, spontaneous menopause at 50 years old without hormone replacement therapy, was referred to the outpatient Unit of the authors' Department due to a pathological cervical cytology HSIL (*high grade squamous intraepithelial lesion*) associated with abnormal uterine bleeding which started around two years earlier. At the Hospital assessment, the gynecological examination showed an extensive, excretory, hypervascularized, bloody and irregular formation protruding through the cervix, suggestive of malignancy. A biopsy was performed that confirmed a serous carcinoma of the endometrium. The gynecological vaginal ultrasound scan revealed an endometrial thickening associated with a hematometra, without additional findings.

The patient was submitted to surgical staging by laparotomy, including peritoneal lavage, extra-fascial total hysterectomy with bilateral adnexectomy, bilateral pelvic and para-aortic lymphadenectomies, infracolic omentectomy, multiple biopsies and cytology of the diaphragmatic domes. The histological study confirmed serous carcinoma of the endometrium, stage FIGO IIIC2 G3. The patient then underwent six cycles of chemotherapy with carboplatin and paclitaxel, with 28 sessions of external radiotherapy and 4 sessions of endovaginal brachytherapy in between.

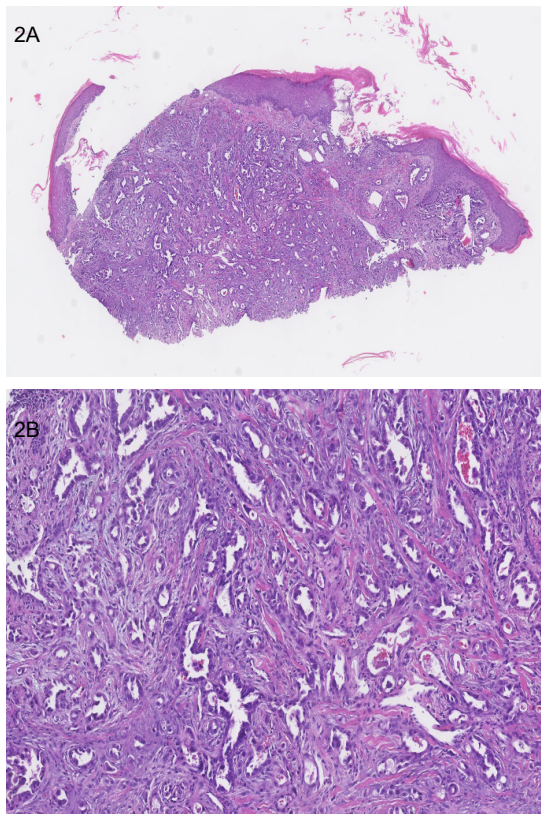
The patient then initiated standard surveillance protocol at the Gynecological Oncology Unit and 21 months after surgery, she presented with a single complaint: an erythematous papular-nodular lesion of rough consistency and about 2 cm diameter in the central region of the scalp. (*figure 1*) A biopsy was performed, which revealed cutaneous metastasis of adenocarcinoma with immune phenotype compatible with the previously diagnosed primary gynecological tumor. (*figures 2 and 3*) Imaging studies also revealed lung, bone, and brain metastasis. Appropriate palliative care was provided, and death occurred two months after the diagnosis of the cutaneous metastasis.

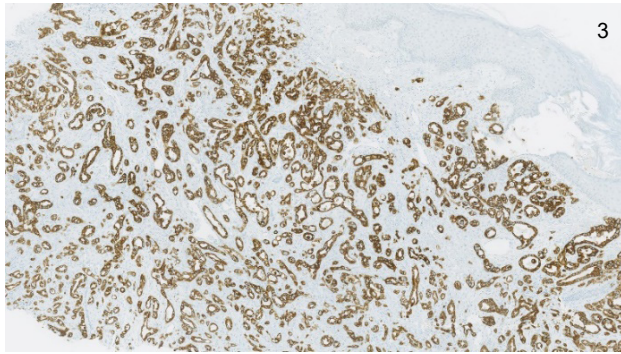
Image 1. Clinical appearance of scalp metastasis



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Fig 2.A.: Hematoxylin-eosin, 4x – Skin biopsy with non-dysplastic epidermis; the dermis is occupied by densely cellular neoplastic proliferation. **Fig 2.B.:** Hematoxylin-eosin, 10x – architectural and cellular detail evidencing glandular serous type morphology, nuclear atypia and stromal desmoplasia. **Fig 3:** Immunohistochemical study for cytokeratin 7, 4x - intense and diffuse positivity is observed in tumor cells. Histopathological and immunohistochemical features of cutaneous metastasis of endometrial carcinoma.





DISCUSSION

In spite of the high prevalence of endometrial adenocarcinoma, reports of scalp metastasis in association with this disease are very uncommon. The authors could only find eight cases of endometrial carcinoma metastatic to the scalp in the literature. (Table 1)

Metastasis to the skin can happen by various mechanisms, such as direct extension, implantation in surgical scars, and lymphatic or hematogenous spread.

Metastases to the scalp are hematogenic and usually a sign of additional metastatic disease, which is why these patients must undergo further proper investigation.

Patients with recurrent endometrial carcinoma may present with an isolated scalp, even with a normal pelvic exam. In such cases, ex-

tensive assessment is essential to exclude other primary sites.¹

Cutaneous metastasis may vary in number, from a single nodule, as reported in this case, to over 20 lesions.² Skin metastasis from endometrial carcinoma are frequently circumscribed to the subcutaneous tissue and present as movable painless masses, usually highly vascular.³ They may also present as nodules, plaques, or inflammatory lesions.^{2,4} In the present case, the exam revealed an erythematous papule-nodular lesion of rough consistency located in the central region of the scalp.

Treatment options are not consensual due to the low number of cases, but seem to include treatment with chemotherapy combined or not with a local excision. Progestogens, tamoxifen, paclitaxel, and radiation therapy have also been used, but haven't shown any differences in survival rate.² In this case, no specific therapy was instated after the diagnosis of scalp metastasis due to the patient's poor performance status, quick clinical deterioration and disease progression.

This case points out that scalp metastasis from endometrial cancer represents direct evidence of widespread disease usually associated with a poor prognosis, consistent with the eight previous reports (table 1). In all the cases found, the maximum life expectancy described was six months after the scalp metastasis diagnosis, except for cases number seven (unknown), and eight (no recurrence).

Author (year of publication)	Age (years)	FIGO stage/grade	Primary tumor	Primary to cutaneous metastasis	Cutaneous metastasis to death
1-Rasbach et al. (1978) ⁶	53	IC/-	Adenocarcinoma	1 month	6 months
2-Damewood et al. (1980) ⁷	58	IVB/—	Mixed mesodermal	2 months	Unknow
3-Debois (1982) ⁸	50	II/G3	Adenocarcinoma	4 months	Few weeks
4-Debois (1982) ⁸	56	IC/—	Adenocarcinoma	25 months	3 months
5-Kushner et al. (1997) ⁴	56	IC/G3	Adenocarcinoma	15 months	3 months
6-Mustafa (2001) ³	45	IA/G2	Adenocarcinoma with acanthoma pattern	36 months	6 months
7-Farooq and Chang (2008) ¹	63	Unknow	Adenocarcinoma	Unknow	Unknow
8-Khurelbaatar et al. (2018) ⁵	45	IB/G3	Adenocarcinoma	12 months	No recurrence since April 2015
9-Present Report	65	IIIC2/G3	Adenocarcinoma serous	21 months	2 months

Table 1. Published case reports

CONCLUSIONS

The metastasis of the scalp in endometrial carcinoma cases is extremely uncommon and usually shows up in the context of diffuse metastatic disease and is, therefore, associated with a poor prognosis. In spite of this fact, these rare cases should lead to increased awareness in the postoperative surveillance of patients with endometrial carcinoma and allow adequate action and counseling when present.

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CONFLICT OF INTEREST

The authors do not report any potential conflict of interest.

ETHICAL APPROVAL

All procedures performed in studies involving human participants were following the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

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