

Rare manifestation of neoplastica alopecia in metastatic cancer

Cutaneous evaluation of patients essential in treating visceral metastases

Dermatologists recently reported the case of a former breast cancer patient who presented a fast-progressing disease condition called alopecia neoplastica, a rare form of skin metastasis in the scalp, underscoring the importance of prompt and accurate skin evaluations of patients with past and present history of visceral carcinomas.

“Neoplastic alopecia is an unusual form of cutaneous metastasis, defined by localized hair loss caused by primary malignant neoplasia that progresses towards the scalp due to metastasis,” described Dr. Felipe Ladeira de Oliveira and co-authors from various departments of dermatology in Rio de Janeiro, Brazil, in a collaborative case report published by *Journal of Surgical Dermatology (JSD)*.

Cutaneous metastasis, in which tumor cells spread from a primary malignancy to the skin, “may correspond to the initial clinical presentation of hidden internal malignancies,” the authors wrote. In addition, “Cutaneous metastasis...may also indicate a neoplasia relapse in previously stabilized oncological patients,” they added.

Compared to the other organs, the skin is a rare site of metastatic disease. “Such condition is seen in 0.7% to 10.4% of cancer patients, and thus is relatively unusual,” Dr. de Oliveira and his colleagues said. Skin metastasis in the scalp is even uncommon — comprising only 4% of all

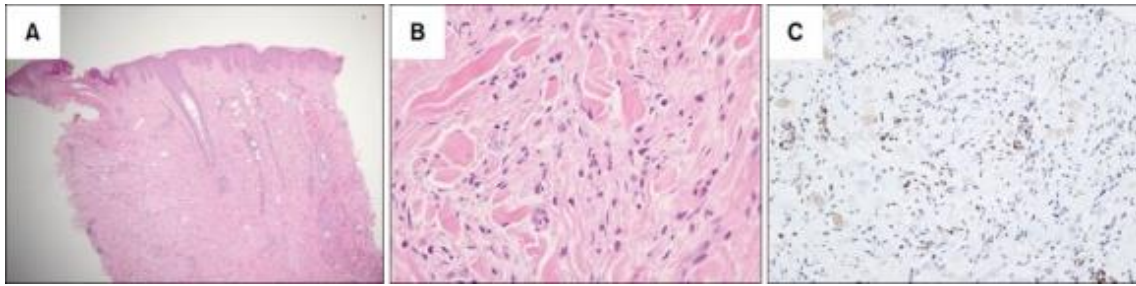
skin metastases — in which a single or multiple non-tender nodules would occur with sudden and rapid growth.

“Triggered by a distinct physio-pathological mechanism that has not been completely clarified, neoplastic alopecia seems to have a multifactor origin,” but which results in tumor cells invading the scalp and damaging the pilosebaceous unit which consists of hair shafts and the hair follicles, the authors explained.

While alopecia neoplastica have been known to spring from primary malignancies such as stomach cancer and prostate cancer, most alopecia neoplastica diagnoses, however, occur in breast cancer patients. “Only 25 cases have been described in literature so far, among which 21 are associated with breast cancer,” they said.

According to the authors, the presence of cutaneous metastasis such as alopecia neoplastica will typically lead to poor prognostic and outcome. However, they explained, “It is still worthy to mention that a study suggests different outcomes for cutaneous metastasis related to internal malignancies arising from different organs and that, among such conditions, breast cancer presents the best outcome.” The researchers also described other studies that found longer survival periods in patients affected by breast cancer cutaneous metastasis, in comparison to patients showing lung cancer and other kinds of neoplasia.





(A) Histologic examination revealed decreased pilosebaceous units and scattered, infiltrated tumor cells around hair follicles, upper and mid-dermis (H&E, $\times 40$). (B) Metastatic adenocarcinoma cells were interspersed between collagen bundles and around hair follicles (H&E, $\times 200$). (C) Tumor cells were positively stained against tumor marker MSH-2 (MSH-2, $\times 200$). (Image credit: *Annals of Dermatology*)

In their case report, the authors sought to outline the differentiation of the disease in their patient, a 47-year-old female who was evaluated with a history of asymptomatic nodular lesion at the scalp with a 1-year evolution. “She presented a prior breast cancer history in 2010 showing newly diagnosed lung metastasis, and was undergoing chemotherapy at the time of consultation,” they noted.

Due to rarity of alopecia neoplastica in clinical practice, it is therefore urgent that a cutaneous metastasis is identified quickly for accurate diagnosis and timely treatment. According to global medical resource portal Medscape.com, “The recognition of cutaneous metastases often dramatically alters therapeutic plans, especially when metastases signify persistence of cancer originally thought to be cured.”

Nevertheless, clinical findings may be subtle and “hence a high index of suspicion is required,” urged Medscape. “However, some tumors metastasize with a predilection for specific areas, and recognition of these patterns can be useful in directing the search for an underlying tumor,” it added.

“In practice, careful clinical evaluation is essential when a cutaneous adenocarcinoma is identified in the absence of a precursor neoplasm. A confident diagnosis of primary cutaneous apocrine carcinoma requires exclusion

of underlying adenocarcinoma by a thorough clinical examination and imaging studies,” the portal further explained.

Dr. de Oliveira and his fellow dermatologists reiterated the same sentiment: “It is worthy to point out the discrepancies between the clinical forms of unusual neoplastic alopecia, as several lesions showing different morphologic and quantitative patterns have already been described,” the authors said.

In addition, Dr. de Oliveira and his co-authors pointed out that close attention need to be paid upon examining the scalp’s lesions. “The lesion’s clinical features play a crucial role at the differential diagnosis, as the presence of erythema could distinguish neoplastic alopecia from alopecia areata,” they explained.

Their case report ultimately highlights the importance of skin examination in detecting metastatic tumors. “As a conclusion, cutaneous evaluation of patients is essential for treating visceral metastases, since the forms of cutaneous metastasis are diverse and can also affect the scalp,” the authors said. ■

The article “Alopecia neoplastica: An uncommon presentation of metastatic breast carcinoma” is published in this issue of JSD on pages 30–33.