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CASE REPORT OPEN ACCESS

Cutaneous metastasis of invasive ductal carcinoma on FNAC: A case report

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Abstract

The cutaneous metastasis is a late uncommon manifestation of cancer and indicates poor prognosis. The cutaneous metastasis can be a first presentation of underlying malignancy. The FNAC is an easy tool for rapid diagnosis of cutaneous metastasis. A 47-year-old female, known case of invasive ductal carcinoma presented to hospital with history of multiple nodular skin lesions over the body varying in size from 0.5-1.5 cm from past 2 months. The smears were cellular and comprises of loose clusters and singly scattered atypical epithelial cells, displaying moderate degree of pleomorphism with mild amount of cytoplasm, large irregular nucleus with fine to coarse chromatin, inconspicuous to conspicuous nucleoli and occasional atypical mitosis against a lipohemorrhagic background. The diagnosis of metastatic deposits of invasive ductal carcinoma was rendered. The clinical diagnosis of metastatic deposits can be challenges, especially in case of distant metastasis or when the cutaneous metastasis is the first presentation. The cutaneous metastasis can be confused clinically as adnexal lesion. The use of special stains and immunohistochemical markers can aid in diagnosis.

Keywords: cutaneous; metastasis; FNAC

Introduction

The cutaneous metastasis is a late uncommon manifestation of cancer and indicates poor prognosis. The cutaneous metastasis can be a first presentation of underlying malignancy and notoriously can mimic clinically to primary skin tumours, many different cancers like melanoma, breast, lung, oropharyngeal and laryngeal malignancies can present with cutaneous deposits [1, 2]. The FNAC is an easy tool for rapid diagnosis of cutaneous metastasis [3].

Case report

A 47-year-old female, known case of invasive ductal carcinoma, left breast, diagnosed 2 year back and underwent mastectomy and chemotherapy, presented to hospital with history of multiple nodular skin lesions over the body varying in size from 0.5-1.5 cm from past 2 months. These well defined, painless nodular skin lesions were firm in consistency on touch with unremarkable overlying skin (Figure 1). The FNAC was attempted from skin lesion on lateral side of neck. On aspiration, the material was blood mixed. The smears were cellular and comprises of loose clusters and singly scattered atypical epithelial cells, displaying moderate degree of pleomorphism with mild amount of cytoplasm, large irregular nucleus with fine to coarse chromatin, inconspicuous to conspicuous nucleoli and occasional atypical mitosis against a lipohemorrhagic background. The diagnosis of metastatic deposits of invasive ductal carcinoma was rendered (Figure 2).

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Figure 1: Shows well defined skin nodule on lateral side of neck.

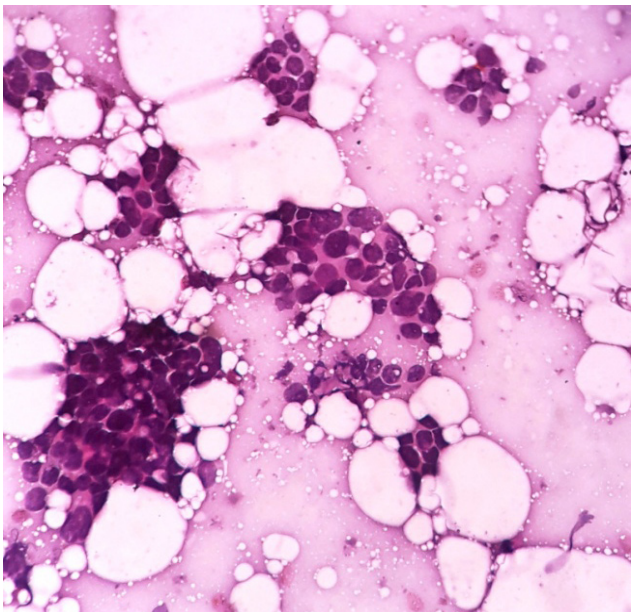

Figure 2: Shows monotonous, loosely cohesive cell cluster and singly scattered ductal epithelial cells displaying moderate degree of pleomorphism. (Pap:40X).

Discussion

The cutaneous metastasis is a late manifestation of malignancy with poor prognosis. The incidence of cutaneous metastasis varied from 0.4% -5% [1, 4, 5], no gender predilection was seen and most of the patients were 50 year and above [1]. The cutaneous metastasis can be solitary or multiple lesions. The lesion can present as nodular, telangiectatic, plaque or cystic lesion [6]. The breast carcinoma is the most common primary in females and lung carcinoma in males [7]. The abdomen and chest wall are common site of metastasis [7], in this case skin nodules were present on upper chest, neck and extremities. The spread of primary malignancy to skin are thought to be by lymphatics and commonly presents near to primary malignant tumor [1, 7] but distant spreads are also reported, indicating possible hematogenous spread [1].

The clinical diagnosis of metastatic deposits can be challenges, especially in case of distant metastasis or when the cutaneous metastasis is the first presentation. The cutaneous metastasis can be confused clinically as adnexal lesion. The eccrine sweat gland can show tubular appearance mimicking ductal carcinoma or extensive clear cell change can lead to erroneous diagnosis of renal cell carcinoma [8]. The primary vs metastatic cutaneous deposits can be a challenge, history of coexisting primary malignancy and features like extra cellular mucin, signet ring cell morphology indicates metastatic deposits. The use of special stains like PAS with diastase can differentiate clear cell change in adnexal tumors with metastatic renal cell carcinoma, alcian blue at pH 2.5 can differentiate adenoid cystic carcinoma with metastatic deposits from breast and gastrointestinal tract [6, 8]. The panel of immunohistochemical markers of CK-7, CK-20, and S-100 can differentiate in nearly 90% of cases with cutaneous metastasis [9].

Conclusion

The FNAC can easily be performed on nodular skin lesion provides early diagnosis, avoids need for much complicated excisional biopsy and helps in early management.

Conflicts of interest

Authors declare no conflicts of interest.

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