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Case Report

Invasive Lobular Carcinoma with Metastasis to Stomach and Uterine Cervix – A Case Report

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Abstract

Metastasis of malignant tumors to uterine cervix is rare. The most of the tumors to this organ are primary carcinomas or direct extension from adjacent pelvic organs. We, hereby, report a rare clinical case with its peculiar presentation. A 48-year-old female presented to gynecology clinic for misplacement of IUCD and on per vaginal examination revealed a hard, indurated cervix from which biopsy was taken and sent for histopathological examination. Microscopy revealed the metastasis to uterine cervix with a possibility of lobular carcinoma of breast. Biopsy report of endoscopy from stomach was given a poorly differentiated carcinoma with signet ring cell features. The entire spectrum of findings was attributed to bilateral lobular carcinoma of breast with metastasis to cervix and stomach. Our case is unique in that the patient had no history of breast carcinoma and after extensive work up was diagnosed with bilateral lobular carcinoma of breast.

Key words: Biopsy, Lobular carcinoma of breast, Metastasis, Uterine cervix

INTRODUCTION

Metastasis is usually seen in locally advanced tumors in diverse conditions. Metastasis to uterine cervix is highly uncommon. We hereby report a clinical case which is unique with its own peculiarities. A 48-year-old woman presented to the clinic for a misplaced intrauterine contraceptive device and on per vaginal examination a clinical suspicion of hard, indurated cervix prompted for a biopsy which showed the metastasis in the cervix from lobular carcinoma of breast. Patient had non-specific abdominal symptoms for a year and hence endoscopic evaluation was done which was again positive for poorly differentiated carcinoma resembling signet ring cells with the probability of metastasis from lobular carcinoma of breast. Patient was finally diagnosed with bilateral lobular carcinoma of breast with diffuse metastasis.

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CASE HISTORY

A 48-year-old woman presented to her gynecologist primarily for the removal of misplaced intra uterine contraceptive device. Transvaginal ultrasound revealed IUCD within the endometrial cavity. Per vaginal examination revealed the cervix to be hard and fornices to be full. Screening for routine cervical cytology revealed negative for malignancy. Endocervical sampling was done which revealed metastasis with a possibility of linitis plastica of stomach or lobular carcinoma of the breast. A screening mammogram was done which revealed BIRADS 4A lesion in the right breast and 4B lesion in the left breast. General physical examination showed pallor. Local examination of the right breast revealed nipple areolar distortion with pseudo orange appearance and no palpable regional axillary lymphadenopathy. The left breast showed nipple retraction with pseudo orange appearance and no palpable regional axillary lymphadenopathy. Upper GI endoscopy and biopsy were done in view of vague abdominal symptoms from antrum and stomach and were reported as poorly differentiated carcinoma with focal signet ring cell features.

PET CT showed hyper metabolism in bilateral breast tissue and bilateral axillary lymph-nodes with diffuse skeletal metastasis.

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Immunohistochemistry on cervical as well as gastric tissue showed strong positivity for GATA3. E Cadherin is lost in both the tissues concluding that the primary is from breast.

DISCUSSION

Metastasis to uterine cervix is rare. According to the literature, an analysis of 325 patients with metastasis to genital tract revealed that the most commonly affected sites are ovary and vagina.[1] In a study of 52 breast cancer cases with metastasis to gynecologic organs, it was shown that the ovaries were affected in 88.5% of cases. Metastasis to the vagina occurred in 5.8%, endometrium in 3.8%, and vulva in 1.9%. Involvement of the uterine cervix was not present in any of those cases.[1]

Possibilities for this are assumed to be smaller size of cervix, reduced blood flow, and distal circulation, as well as abundant fibrous tissue.

Metastasis to female reproductive system by invasive lobular carcinoma is more likely than invasive ductal carcinoma [Figure 1]. However, prognosis remains same in both types of breast cancer.[2]

In most cases, metastatic disease to cervix presents with the clinical symptoms of abnormal vaginal bleeding and abdominal discomfort, whereas some patients remain asymptomatic for prolonged duration of time. However, the patient in our case had only mild abdominal discomfort and visited the clinic primarily for removal of intrauterine contraceptive device.[3-10]

It is crucial to differentiate the metastasis from primary carcinoma of genital tract as the management is completely different.[8] High clinical suspicion of cancer during gynecological examination in this case has helped in the diagnosis of primary carcinoma.[6,7]

Metastasis from breast cancer to gastrointestinal tract is relatively rare. In such scenario, clinical symptoms include loss of appetite, bloated sensation, upper abdominal pain, bleeding, and vomiting. As per Taal *et al.*, invasive lobular carcinoma [Figures 2 and 3] constitutes for 83% of all the metastases from malignant breast tumors and it frequently spreads throughout the stomach.[4] As observed in our case, metastatic gastric cancer often depicts as linitis plastica on endoscopic examination, which usually spreads to the muscular

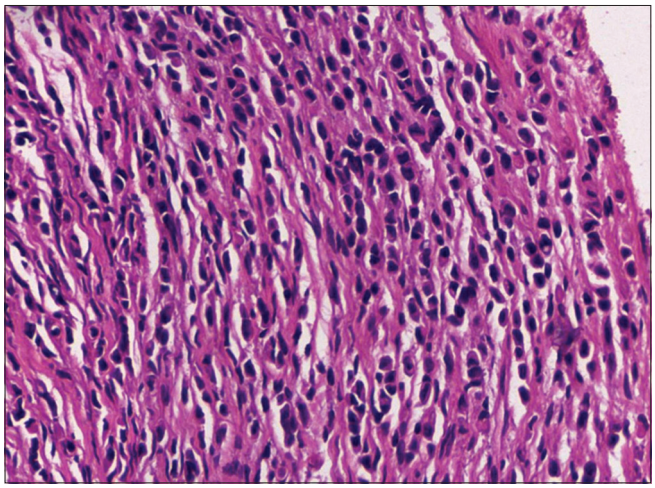

Figure 1: Cervical biopsy showing atypical discohesive cells within fibrous tissue

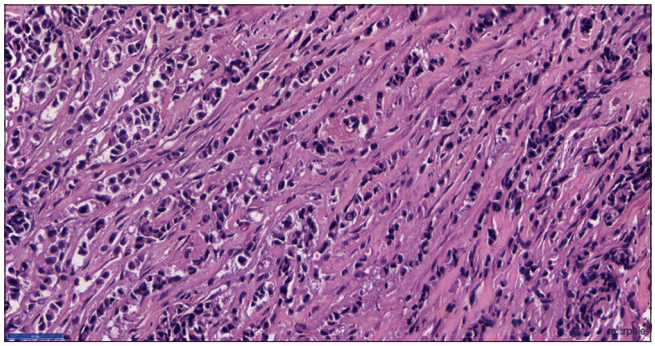

Figure 2: Breast biopsy showing proliferating non-cohesive cells with single-file linear cords invading stroma

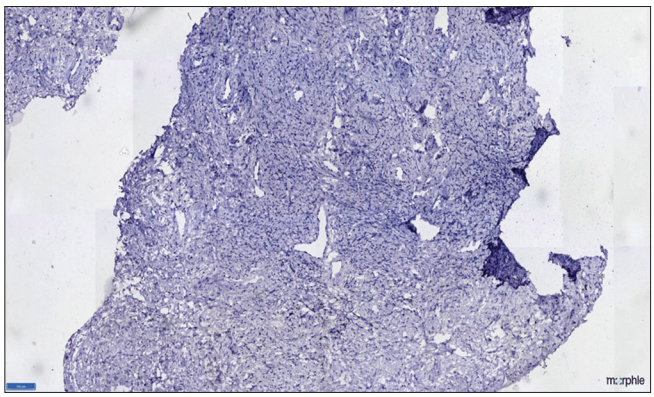

Figure 3: E cadherin loss in the breast biopsy

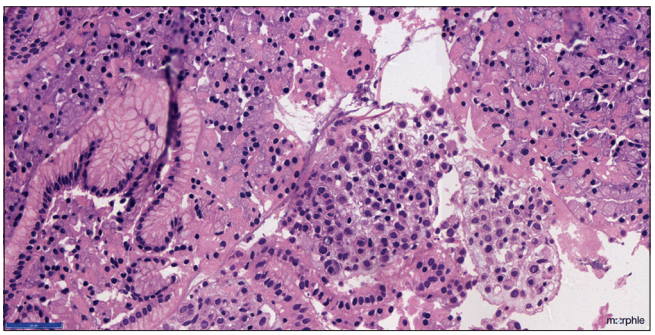

Figure 4: Tumor cells with signet cell features in gastric biopsy (100×)

layer of the stomach and gastric submucosa, and hard nodules are rarely encountered.

Endoscopy alone cannot differentiate primary gastric cancer from metastatic gastric cancer. As most of the gastric metastasis is confined to seromuscular and submucosa layers, endoscopic examination remains normal in 50% of the cases.

Since the tumor cells infiltrate the submucosal layer and not the mucosal layer; a deeper biopsy is recommended for revealing the metastatic pattern. Indian file pattern of lobular carcinoma metastasis mimics signet ring cells which could be a potential pitfall mistaking it for a primary of gastric origin [Figure 4].

Histopathologically, metastasis to gastrointestinal tract was reported majorly from invasive lobular carcinoma when compared to invasive ductal carcinoma, as the latter meta-stasis mainly to lungs, bones, and liver. Three main patterns are observed in gastric cancer meta-stasis from breast-localized pattern, diffuse infiltration, and external compression.[4]

PET had relatively lesser sensitivity for gastric cancer because of physiological absorption of F-18 fluorodeoxyglucose and involuntary movements by the gastric wall.[5]

Although morphologically single-cell invasive pattern is observed both in diffuse gastric adenocarcinoma and metastatic gastric cancer, there is distinctive difference in therapy and prognosis. Differential diagnosis of primary gastric cancer versus gastric metastasis is significant and the confirmation is always only by histology and immunohistological studies.

In such a case, immunohistochemical work up could aid in precise diagnosis. In our present case, loss of expression of E cadherin was observed in the trucut biopsy of bilateral breasts [Figure 3].

CONCLUSION

Invasive lobular carcinoma has higher frequency of meta-stasis to bone, skin, gastrointestinal tract, uterus, meninges, and ovary as well as diffuse serosal involvement. This case reminds the importance of having high clinical suspicion of malignancy in all elderly women as potential risk for development of breast cancer.

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