



KRUKENBERG TUMOR IN OVARY- A CASE REPORT

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ABSTRACT

Krukenberg tumor is a metastatic signet ring cell adenocarcinoma of the ovary. It is uncommon, accounting for 1% to 2% of all ovarian tumors, most commonly observed in the stomach-ovarian axis. Here a case of Krukenberg tumor is presenting whose primary site was from breast.

KEY WORDS – Krukenberg tumor, Stomach-ovarian axis, Metastatic



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INTRODUCTION

Krukenberg tumor is an ovarian metastasis of a gastric tumor and accounts for 1%—2% of all ovarian tumours [1]. In 1896, Friedrich Krukenberg (1871–1946), a German gynaecologist and pathologist, described a new type of primary ovarian neoplasm. The true metastatic nature of this lesion was established 6 years later [2]. Here a case of Krukenberg tumour of a lady aged 35 years is presenting because of rarity.

MATERIALS & METHODS

Total abdominal hysterectomy with bilateral oophorectomy specimen was received in the department of Pathology and Surgery Burdwan medical college West Bengal, in the month of August, 2010. Hematoxylin & Eosin stain was done from the routinely processed paraffin embedded tissue sections after gross examination of the tissue.

Case summary

Clinical presentation

A 35 years old lady presented in Surgery OPD with pain lower abdomen and bilateral pelvic mass following mastectomy 6 months back.

On general examination

patient was fully conscious & oriented, pulse 88 per minute, blood pressure 110/70 mm of Hg, pallor ++, lower abdomen distended.

Ultrasonography

On USG bilateral ovarian mass (size 20cm x15cm both approximate) with heterogenous

ecotexture diagnosed as bilateral ovarian tumour.

Patient then admitted in the gynae department for TAH-BSO (total abdominal hysterectomy with bilateral oophorectomy). Tissue sent to the department of pathology for reporting.

Gross finding

Both ovaries were enlarged (size 16 x 13 x 10 cm & 19 x 15 x 10 cm) asymmetrically with a bosselated contour. They are solid, although they are occasionally cystic. Capsular surface of the ovaries with Krukenberg tumors is smooth and free of adhesions or peritoneal deposits. The sectioned surfaces are yellow to tan white with dark areas of necrosis. (Fig-1&2)

MICROSCOPY

H & E stained sections shows both hypercellular and hypocellular areas having fibroblastic proliferation. Fibroblasts are arranged in fascicles, whorles with interspersed vessels and oedema at places. There are presence of malignant epithelial cells with oval nucleus, prominent nucleoli & well defined cytoplasm showing high degree of pleomorphism and increased N/C ratio. The cells are found to form acinus structures with intracellular mucin production to form a signet ring appearance. There are considerable numbers of atypical mitosis in the whole section. The same metastatic deposits also noted within the endometrium, cervix and omental tissue. Plenty of signet rings cells are arranged in clusters (Fig-3).



Figure -1&2

The cut sectioned of ovary showing half of cut surface of ovary tan white coloured & solid and remaining half in dark brown to red coloured & solid.

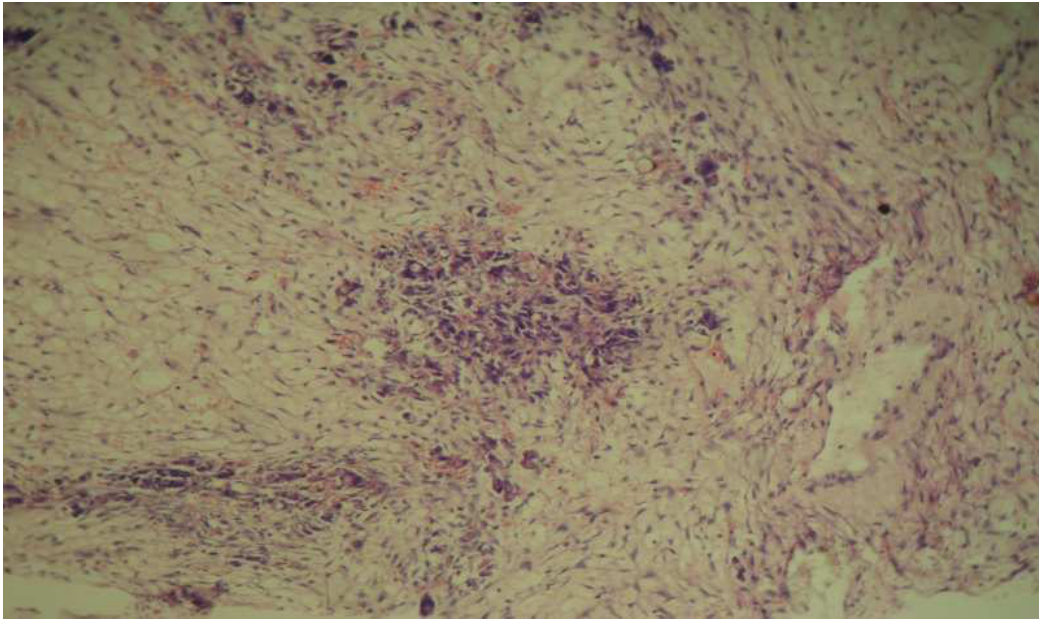


Figure 3

Photomicrograph showing signet ring cells within ovarian stroma cells. H&Ex400

DISCUSSION

Krukenberg tumour refers to gastrointestinal cancer metastatic to the ovaries; accounting for 1%-2% of all ovarian tumors. The diagnosis of Krukenberg tumours largely depends on the recognition of its characteristic light microscopic features with hematoxylin-eosin-stained sections. However, Krukenberg tumours may mimic other metastatic or primary ovarian tumours. Distinction from the latter is of great importance as misclassification of Krukenberg tumour as a primary ovarian tumour may lead to suboptimal treatment of the patient. To facilitate discussion of differential diagnosis of Krukenberg tumour, the diagnosis is divided into 2 major parts according to the histologic subtype of Krukenberg tumour. The distinction should be made between (1) classic Krukenberg tumour and ovarian tumours with signet ring cells, and (2) tubular Krukenberg tumours and ovarian tumours with tubular pattern. The patients with breast metastatic cancers in the ovaries are likely to have no pelvic complains (3). The definitive diagnosis of

metastatic cancer to the ovary is a surgical diagnosis. Prophylactic oophorectomy is usually the method of diagnosis of metastatic breast cancer to the ovary (4,5).

CONCLUSION

Krukenberg tumour is a metastatic ovarian tumour that is histologically characterized by mucin-laden signet ring cells. Stomach is the most common primary site, but other organs can serve as a primary site. The lymphatic system is the most likely route for metastasis. Diagnosis of Krukenberg tumour with unknown primary warrants careful investigation of mainly the digestive tract and other potential sites. CA 125 levels can be used for screening for early detection of ovarian metastasis as well as for monitoring the course of disease. The prognosis of Krukenberg tumour is poor and no curative treatment is currently available.

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