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Case Report

From Pelvis to Bowel: Tracking an Uncommon Metastatic Pathway

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Abstract

Cervical cancer, the second most common malignancy among Indian women, primarily arises from the transformation zone of the cervix. High-risk HPV types, especially 16 and 18, are implicated in approximately 70% of cases. The median age of diagnosis is around 50 years. Metastasis to the gastrointestinal tract is rare, occurring in less than 4% of cases, with small bowel involvement being extremely uncommon.

Keywords: Squamous cell carcinoma, Cervical cancer, Immunohistochemistry, p63, CK5/6, CK20.

INTRODUCTION

Cervical cancer is one of the most common malignancies affecting women worldwide, particularly in developing countries. It arises from the transformation of the epithelial cells lining the cervix, most commonly at the squamocolumnar junction. Persistent infection with high-risk human papillomavirus (HPV) types, especially HPV-16 and HPV-18, is recognized as the principal etiological factor. Other risk factors include early onset of sexual activity, multiple sexual partners, immunosuppression, long-term use of oral contraceptives, and smoking.

Histologically, the majority of cervical cancers are squamous cell carcinomas, followed by adenocarcinomas and less common variants. The disease typically progresses through well- defined precancerous stages known as cervical intraepithelial neoplasia (CIN), which can be detected through routine Pap smear screening. Early detection and management of these precancerous lesions have significantly reduced the incidence and mortality of cervical cancer in populations with organized screening programs.

Early screening and the advent of concurrent chemo-radiation therapy (CCRT) have improved the survival of patients. Intestinal metastasis in carcinoma cervix is very uncommon and seen in less than 4% of cases and to date, only 24 cases have been reported in medical literature. The presenting symptoms resemble an acute abdomen and causes

diagnostic dilemma, hence awareness about this rare complication is important. Intestinal metastatic involvement may be detected either synchronously or after several months or even years after the primary diagnosis. The prognosis is poor and hence awareness about this rare complication is important.[1]

CASE REPORT

A 59-year-old female presented with abdominal pain for the past one month associated with vomiting on food intake. Past history: Known case of Carcinoma cervix, diagnosed one year back for which hysterectomy was done. Imaging revealed subacute small bowel obstruction, with CT scan showing circumferential thickening of the distal ileum. Specimen of resected ileum was sent for HPE. [Figure 1]

Figure 1: Gross image of circumferential grey white lesion in the Ileum

Microscopy from the lesion show sheets of atypical squamous cells with round to oval pleomorphic nuclei, scant to moderate amount of eosinophilic cytoplasm, along with individual cell keratinization and foci of keratin pearls. The tumor is located in the submucosa with normal overlying mucosa and invading muscularis propria [Figure 2&3]. Surgical resected ends are uninvolved. All lymph nodes show reactive follicular hyperplasia without tumor deposits. Further Immunohistochemistry for CK5/6 and P63 was done and confirmed as Metastatic deposits from Carcinoma cervix to intestine. [Figure 4 &5]

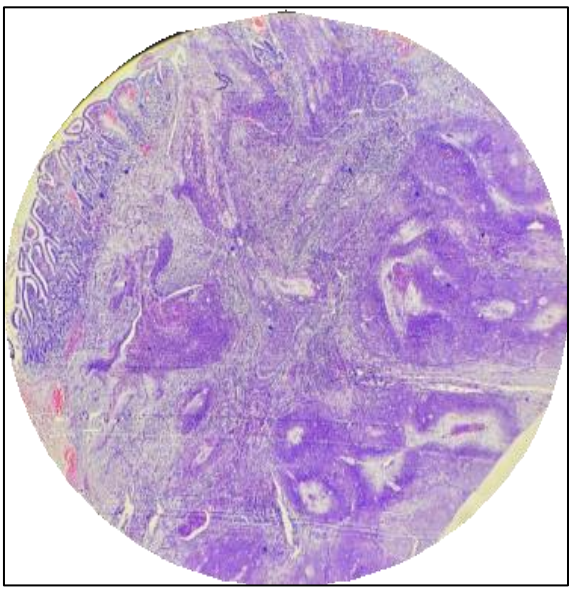

Figure 2: H&E 40X - Sheets and lobules of atypical squamous cells invading the muscularis propria.

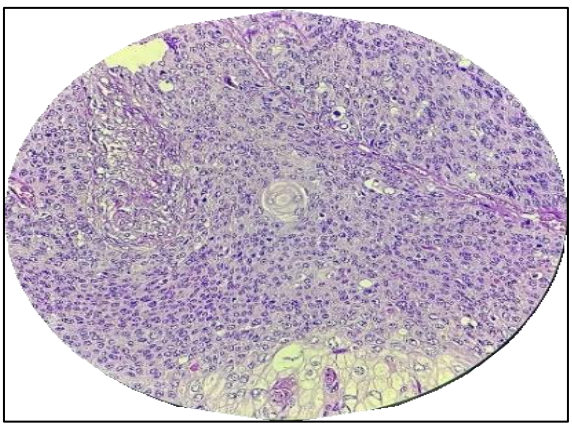

Figure 3: H&E 400X: Sheets of atypical squamous cells with keratin pearls suggesting Squamous Cell Carcinoma

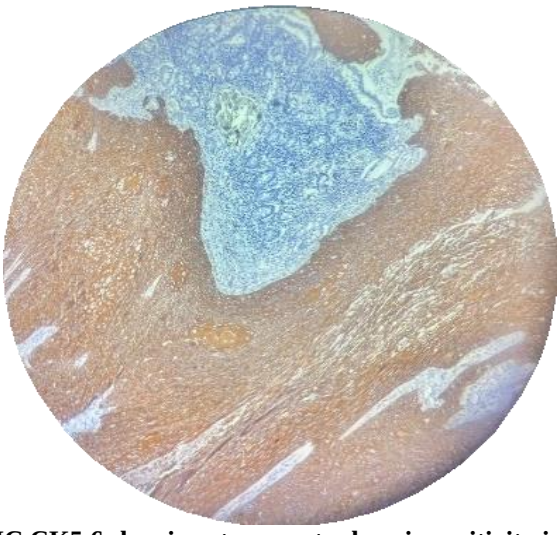

Figure 4: IHC CK5,6 showing strong cytoplasmic positivity in tumor cells

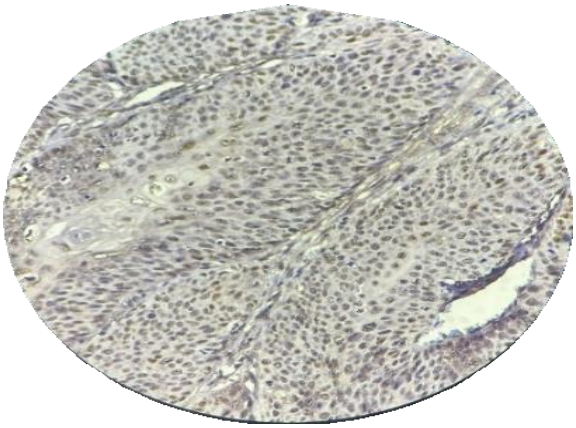

Figure 5: IHC P63 showing nuclear positivity in tumor cells

IHC markers P63, CK 5/6 confirmed Squamous Cell Carcinoma metastasis from cervix.

DISCUSSION

Intestinal metastasis from carcinoma cervix is an extremely rare event, as cervical cancer commonly spreads by direct extension to adjacent pelvic organs or by lymphatic and hematogenous routes to distant organs such as lungs, liver, or bones. Involvement of the small intestine is unusual and has been reported only in a few cases worldwide. The mechanisms of spread to the intestine may include lymphatic dissemination through para- aortic or mesenteric nodes, hematogenous spread, peritoneal seeding, or occasionally iatrogenic implantation during laparoscopic or surgical procedures. The rarity of small bowel metastasis is attributed to several protective factors, including the presence of abundant lymphoid tissue and IgA secretion, rapid epithelial turnover, fast luminal transit, and reduced mucosal injury — all of which make implantation and growth of tumor cells difficult.

Clinically, patients usually present with features of intestinal obstruction, such as abdominal pain, distension, vomiting, or constipation, and the diagnosis is often made only during surgery or on histopathological examination.[2]

Histologically, the lesions show squamous cell carcinoma similar to the primary cervical tumor, often infiltrating from the serosal surface inward. Immunohistochemistry typically shows p63 positivity and CK20 negativity, confirming cervical origin. The prognosis is poor, as intestinal metastasis indicates disseminated disease. Surgical resection offers only palliation, aiming to relieve obstruction or improve quality of life. Hence, in any cervical cancer patient presenting with unexplained intestinal obstruction or acute abdomen, intestinal metastasis should be considered as a rare but important differential diagnosis. [3,4]

CONCLUSION

In any patient with carcinoma cervix presenting as acute abdomen, a high index of suspicion for intestinal metastasis should necessitate prompt diagnosis and treatment. Cervical cancer can infiltrate locally and directly spread to adjacent organs including the vagina,

peritoneum, urinary bladder, ureters, rectum, and paracervical tissue, but the intestine metastasis from cervical cancer is extremely rare, which can easily be misdiagnosed.

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