ORIGINAL RESEARCH PAPER

Pathology

PRIMARY ADENOSQUAMOUS CARCINOMA OF COLON – A RARE CASE DIAGNOSED ON HISTOPATHOLOGY

KEY WORDS: Primary Adenosquamous Carcinoma, Transverse colon

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ABSTRACT

Introduction: Primary Adenosquamous carcinoma is a rare colorectal tumour with both an adenocarcinoma and a squamous cell carcinoma component. To the best of our knowledge, only few cases have been reported in the literature. Adenosquamous carcinoma of the colon accounts for 0.02%–0.06% of all colorectal malignant tumours[2,5]. **Case Presentation:** We report a case of a 70-year-old woman, hospitalized for acute abdominal pain, fever, vomiting and constipation. Ultrasonography revealed perforated gall bladder. Exploratory laparotomy revealed liver intestinal adhesions, mass lesion in transverse colon and liver abscess. Transverse colon was resected and liver abscess was drained. Resected transverse colon was sent for histopathological evaluation, which revealed Adenosquamous carcinoma of intestine. Patient was discharged after post-op stabilization and sent to higher centre for further treatment. **Discussion:** Primary Adenosquamous carcinoma is a rare colorectal neoplasm revealed by non-specific complaints. Its clinicopathology is not yet understood. Preoperative diagnosis is often difficult. Surgical resection remains the mainstay of treatment. **Conclusion:** Primary Adenosquamous carcinoma is a malignant tumour with poorer prognosis than adenocarcinomas. Histopathological evaluation is indispensable for diagnosis of Primary Adenosquamous carcinoma as its clinical presentation is non-specific, so that appropriate treatment can be provided.

INTRODUCTION

The incidence of colorectal cancers is increasing throughout the world, the majority of them being adenocarcinoma. Adenosquamous carcinoma (ASC) is very rare[1]. The incidence is around 0.02 - 0.06% of all colorectal malignant tumours [2,3]. This rare entity is characterized by the presence of both adenocarcinoma and squamous cell carcinoma components, and is characterized by greater potential of metastasis than adenocarcinoma [4]. Thus, early detection and treatment of ASC is important. The aim of this study is to describe a rare case of Primary Adenosquamous carcinoma in a 70-year-old female, who presented with non-specific complaints of abdominal pain, fever, vomiting and constipation and underwent surgical resection.

CASE HISTORY

A 70-year-old female presented with a history of dull aching abdominal pain, fever, vomiting and constipation for 3 days.

The level of haemoglobin was 8.70g/dl, serum total protein was 5.86gm/dl, serum albumin was 2.13gm/dl and A:G ratio was 0.57. There were no other abnormal laboratory findings. Ultrasound revealed perforated gallbladder.

Exploratory laparotomy revealed intestinal adhesions, mass lesion in transverse colon and liver abscess. Transverse colon was resected and liver abscess was drained. Resected transverse colon was sent for histopathological evaluation, which revealed Primary Adenosquamous carcinoma of intestine. Patient was discharged after post-op stabilization and sent to higher centre for further treatment.

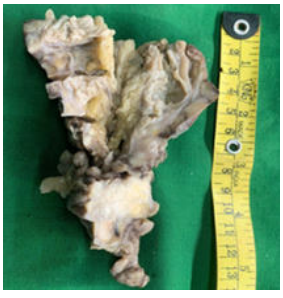
GROSS EXAMINATION

A 13x7 cm sized tubular specimen (transverse colon attached with mesentery) with five separate tissue specimens are received.

At proximal end 6x5 cm sized greyish white, firm mass is seen. On cut section of mass, it shows, greyish white rugosities like areas.

At distal end outer surface shows 3x3 cm size mass. On cut section of mass, it shows greyish white to yellowish firm areas.

FIGURE 1: (GROSS)
Image shows whitish firm mass at proximal and distal ends showing greyish white rugosities and few greyish white to yellowish areas.



MICROSCOPIC EXAMINATION

H&E stained section shows mucosa, submucosa of intestine. From submucosa, there is origin of plenty of infiltrating nests of atypical cells with high N:C ratio, moderate pleomorphism, prominent nucleoli and eosinophilic cytoplasm (squamous differentiation).

There are areas of marked keratinization with plenty of keratin pearl formation. At many places, there are duct like structure lined by atypical large cells with high N:C ratio, prominent nucleoli and severe degree of pleomorphism seen.

In between, there are nest of atypical squamous cells, in the centre of them, there are large mucinous cells with eccentrically placed nucleus and intracytoplasmic mucin are seen (adeno differentiation).

All of these nests and ducts of cells are infiltrating in muscularis and penetrating serosal layer and they are present in mesenteric fat with marked desmoplastic reaction.

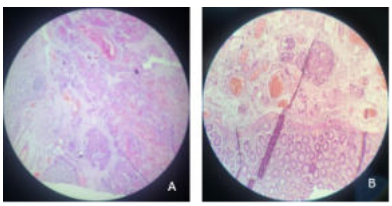


FIGURE 2 (A) AND (B): (Low Power)
Images shows plenty of infiltrating nests of atypical cells, arising from submucosa, showing squamous differentiation

with few duct-like structures lined by atypical cells.

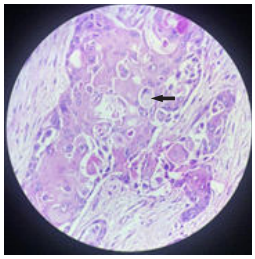


FIGURE 3: (High Power)
Image shows nest of atypical squamous cells, in the centre of them, there is large mucinous cell (→) with eccentrically placed nucleus and intracytoplasmic mucin.

DIAGNOSIS

- Malignant lesion of intestine
- Primary Adenosquamouscarcinoma of intestine
- Moderately differentiated
- TNM Stage: $T_3N_xM_x$ (Infiltrating the serosa)
- Stage: II

DISCUSSION

Adenosquamous carcinoma of the colon accounts for 0.02%–0.06% of all colorectal malignant tumours [2,3]. The first case was reported by Herxheimer in 1907[4]. In 1999, Cagir et al. [2] reported 145 cases of ASC. The pathogenesis of ASC is unclear.

Several hypotheses have been advanced for its histogenesis in the gastrointestinal tract. Four hypotheses have been suggested:

1) Ectopic squamous cells in the colonic mucosa may be directly transformed into squamous malignant cells.
2) Undifferentiated or reserve cells in the colonic epithelium maybe transformed directly into squamous cell carcinoma.
3) Normal glandular cells may be transformed into a malignant squamous neoplasm.
4) Adenocarcinomas in situ can directly be transformed into malignant squamous cells[3,5,6].

In the review of Cagir et al., the mean age of patients was 67 years[2], with male predominance (57%)[4] and the sex-ratio was 1.34. These findings contrast with those of our case, our patient being an old female in her eighth decade of life.

In the review of Cagir et al. [2] 53% of the carcinomas were located in the sigmoid colon, rectum and anus, 28% in the right colon (cecum and ascending colon), and 19% in the middle segment (transverse colon and descending colon). In our case the tumour was located in the transverse colon.

The squamous cell component has been reported to have greater metastatic potential than the glandular cell component. Thus, patients may experience more aggressive clinical symptoms. ASC of the colon, though rare, has been associated with a worse prognosis than colorectal adenocarcinoma.

Histopathological evaluation is indispensable for diagnosis of Adenosquamous carcinoma as its clinical presentation is non-specific as well as to identify whether the tumour is primary or secondary in origin.

The treatment of ASC is a colectomy with regional mesenteric lymph nodes dissection. Because of the rarity of this entity, the role of adjuvant chemotherapy is unknown. [3,7]

CONCLUSION

- ASC of the colon is rare and associated with a worse prognosis than adenocarcinoma.
- Histopathological evaluation is indispensable for diagnosis of Adenosquamous carcinoma as its clinical presentation is non-specific.
- It also plays a vital role to identify whether the tumor is primary or secondary in origin.
- Since the efficacy of adjuvant chemotherapy and radiation therapy for ASC of the colon has not been yet elucidated, surgical resection remains the best therapeutic option.

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