Rectal adenosquamous carcinoma and carcinoma stomach in two family members

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A girl with rectal adenosquamous carcinoma (adenocanthoma) with bizarre tumor giant cells is reported; her father simultaneously had carcinoma of the stomach. [Indian J Gastroenterol 1997; 16: 66-67]

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Adenosquamous carcinomas (adenocanthomas) are uncommon in the gastrointestinal tract and are rare in the rectum.1 Tumor giant cells have not before been reported in rectal adenosquamous carcinoma. We report a girl with such a condition; her father simultaneously had carcinoma of the stomach.

Case Report

A 17-year-old girl was admitted with complaints of fresh bleeding per rectum of one month duration. Physical examination was unremarkable except for the presence of pallor and evidence of fresh bleeding on per rectal examination. The hemoglobin was 8.0 g/dL with normal total and differential leukocyte counts. Flexible sigmoidoscopy revealed blood and a round fleshly mass occupying practically the whole lumen of the rectum. Endoscopic biopsy of the lesion revealed the presence of granulation tissue.

During her stay in hospital, she passed cast-like tubular structures along with pieces of fleshly masses per rectum. Histologic examination of these structures revealed proliferating blood vessels with sheets of polymorphs and foreign-body type of giant cells. Occasional degenerating cells with bizarre pleomorphic nuclei were seen. The patient underwent abdomino-perineal resection of the rectum.

Gross examination of the resected specimen revealed a soft oval mass, 6 cm x 5 cm x 4 cm, with glistening, greyish, smooth surface, arising from the rectal wall. The cut surface was homogeneous, white and mucoid in the center; the periphery was brown with areas of necrosis and hemorrhage.

Sections processed from outer areas of the tumor showed a large number of proliferating blood vessels with plenty of polymorphs and giant cells. Sheets and cords of cells with hyperchromatic and bizarre nuclei were also seen. On careful examination most of these giant cells were labeled as foreign-body type, except a few which were identified as tumor giant cells. Sections processed from deeper areas of the tumor showed an admixture of adenosquamous and squamous components. Both the elements were moderately differentiated. The adenosquamous element showed areas of poorly formed glands. Many bizarre tumor giant cells were also seen (Figs 1 and 2).

A final diagnosis of adenosquamous carcinoma was made. Mucin histochemistry showed a marked decrease in mucin secretion with predominance of sialomucins. Immunohistochemical study was not possible at our center.

During the same period, her father, aged 55 years, was admitted with carcinoma of the stomach. Histologic examination of endoscopic biopsy material showed poorly differentiated adenocarcinoma.

Discussion

This young girl had adenosquamous carcinoma of the rectum, which is a rare tumor.1

The presence of foreign body giant cells represented

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Fig 1: Adenomatous pattern along with squamous element (arrow heads). Tumor giant cells are also seen (arrow) (H & E, 100x)

Fig 2: Adenocarcinoma with squamous element (arrow head). Large foreign body type of giant cells with plenty of cytoplasm (open arrow) can be differentiated from tumor giant cells with less cytoplasm and multiple pleomorphic nuclei (arrows) (H & E, 320x)

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good inflammatory and immunologic response, a feature noted to be associated with a good prognosis. On the other hand, the presence of tumor giant cells signifies more anaplastic nature of the tumor and therefore carries a bad prognosis. To the best of our knowledge, tumor giant cells have not been reported in adenocarcinoma of the rectum so far.

Another interesting feature was the diagnosis of poorly differentiated carcinoma of the stomach in the father of the patient during the same period. Whether the association is coincidental or had a genetic basis, as in familial polyposis coli or family cancer syndrome, is conjectural. Previous reports suggest that allele loss in stomach cancer has many similarities with colon cancer, including loss of 17p, 5q and 18q (sites for p53, APC and DCC cancer suppressor genes, respectively). The role of somatic mutations in tumor suppressor gene p53 in colorectal cancers as well as in intestinal and diffuse types of gastric cancers is well known. Recently, APC and DCC cancer suppressor genes have also been implicated in gastric and colonic carcinogenesis, through the adenoma-carcinoma sequence. The "two hit" hypothesis of Knudson in oncogenesis due to cancer suppressor genes may explain the occurrence of this bizarre cancer in this young patient.

References

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