Childhood rectal carcinoma

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Summary

Carcinoma of rectum in an 11 years old male child is presented with a history of bleeding per rectum, constipation and lower abdominal pain. Colorectal carcinoma in childhood is rare and the reported incidence is about 1.3 per million lives. Its clinical, pathologic and histological characteristics are different from those of adults. The prognosis is poorer in children, the reason for which it is explained with a brief discussion.

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Introduction

Compared to the adults, carcinoma of the rectum is rare in children. The incidence of colorectal cancer increases with age.1 However, no age is immune. Primary gastrointestinal system malignancies constitute approximately 2% of pediatric neoplasm and colorectal carcinoma is the second most common malignancy after primary liver tumors.2 Carcinoma of rectum is almost never considered in the differential diagnosis of bleeding per rectum in children and when diagnosed, is usually too late for any curative therapy.3 But it must be considered as a differential diagnosis in childhood if the patient presents with per rectal bleeding in conjunction with abdominal pain and weight loss.4 One such case is presented with a review of the literature.

Case Report

Master Abdur Rahim, age-11 years, S/O Mr. Md. Jiad Ali of Shyamnagor, Satkhira, admitted in KMCH on 04.07.10 with complaints of per rectal bleeding associated with constipation for 1 year, initially the bleeding was irregular during defecation but later

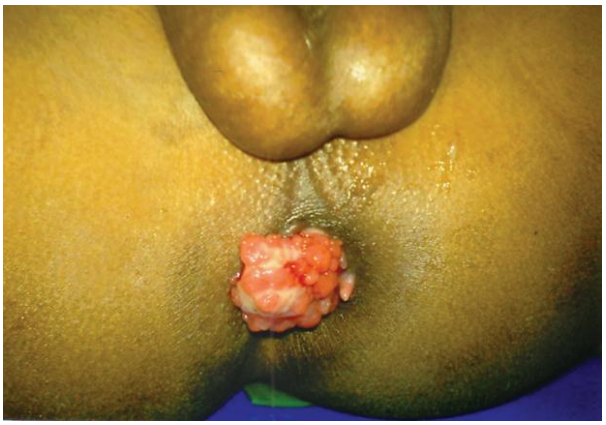

Fig 1 : Protruding rectal growth

it became regular. He was treated by a quack with some injection at anal region several times. After 6 months he developed lower abdominal and perianal pain, burning in nature, gradually increasing in severity without any radiation. He also complaints that something is coming out through anus, which is gradually increasing in size for last 2 months.

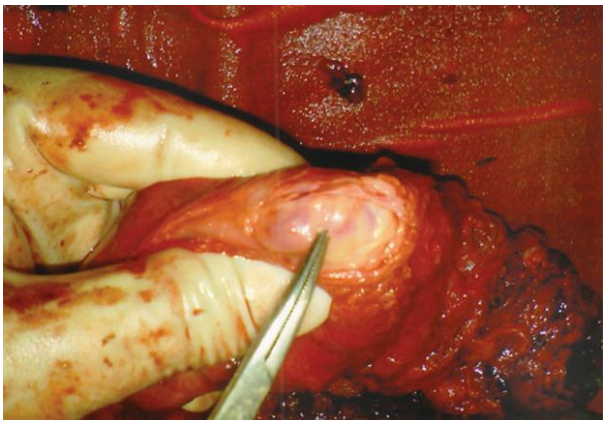

Fig 2 : Resected rectal carcinoma showing enlarged pararectal lymph node.

On examination the child was anxious, irritable with fear of more anal pain, not anemic, anicteric, afebrile and accessible lymph node not palpable. Abdominal examination revealed no abnormality. Digital Retal Examination (DRE) showed that an opening of fistulous tract with sprouting granular margin 1 cm left to anus and irregular growth at anal margin. The painful growth is irregular, firm in consistency, involving the whole circumference, upper limit is just approachable by examining finger and fixed anteriorly. The finger was blood stained. Other systems revealed no abnormality. So, he was investigated with a clinical diagnosis of carcinoma of rectum and differential diagnosis of anal fissure and rectal polyp.

His blood examination revealed Hb-60%, ESR-24 mm in Ist hour, total and differential leucocytes count were normal. Chest skiagram was normal. Histopathology of the tissue from rectal growth (19.06.10) showed villous adenoma with high grade dysplasia. Colonoscopy (10.07.10) revealed an ulcerated polypoid growth covering the whole circumference of rectum, elongated up to 8 cm from the anal verge and histopathology of the tissue from the growth showed well differentiated adenocarcinoma.

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On 21st June, 2010 synchronous abdomino-perineal resection (APR) was done. The liver was normal and para-aortic lymph node was not enlarged. The growth was involving the whole length and circumference of the rectum and fixed anteriorly. All the tumor tissue excised along with cutaneous fistulous tract and pararectal enlarged lymph node. Histopathology of the excised tissue revealed moderately differentiated mucinous adenocarcinoma invading the muscle coat. Proximal resected margin was free of tumor but distal margin was invaded by the tumor. Pararectal lymph node was free of tumor. Post operative period was uneventful except incision site mild wound infection.

Master Rahim already completed three cycles of chemotherapy and is now enjoying a symptom free life with a permanent colostomy.

Discussion

Pediatric colorectal cancer is the second most common cancer of the alimentary tract, following only liver tumor.5 Carcinoma rectum is a very uncommon malignancy in childhood. The incidence of colon cancer is found to be 1.3 cases per million children.6 Most pediatric cases occur in their second decade of life but cancer has been diagnosed in a female child as young as 9 months of age.7,8 Incidence increases with age from 0.39 per 1000 person per year at age 50 to 4.5 per 1000 person per year at age 80.9 Colorectal cancer differs greatly between adults and children. These differences include the presenting sign and symptom, primary site of tumor, pathologic finding, stage and prognosis.10

The development of carcinoma appears to be associated with several predisposing factors. These include a diet high in fat and cholesterol and low in fibers, exposure to environmental chemicals and radiation, polyposis syndromes, inflammatory bowel disease, hereditary nonpolyposis syndromes, urinary diversion with a previous ureterosigmoidostomy, chronic parasitic infection, and previous radiation therapy. Incidence of sporadic form of colorectal carcinoma in children is approximately 75% and 25% of childhood cases have some associated predisposing condition.10

Most common presenting symptoms are per rectal bleeding and constipation. Diagnosis can be delayed if the problem is being treated for another diagnosis, such as constipation. This delay in diagnosis is probably an important factor contributing to the advanced stage of disease.10,11

Two findings of colorectal tumors markedly differ in children: stage and the histologic type of adenocarcinoma. Approximately 40% of adults have tumor in which regional lymph nodes are involved or have distant metastasis (Dukes' stage C or D). In children, more than 80% of the tumors are Dukes' stage C or D.8,11,12 In addition, the histologic finding of a mucinous adenocarcinoma is found in over one half of the children which has an aggressive biological behavior and is known to metastasize early.13 The synergism of the more advanced stage of disease at the time of diagnosis and the increased frequency of a mucinous subtype contribute to the poor prognosis.8,10

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