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Colorectal cancer in pregnancy - A rare case report

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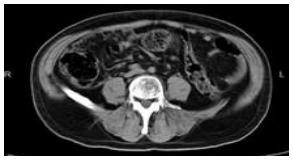
Abstract : Colorectal cancer during pregnancy is rare, with a reported incidence of 0.002 (1). The clinical symptoms of colorectal cancer overlaps with the common symptoms of pregnancy such as nausea, vomiting, abdominal pain, altered bowel movements, rectal bleeding leading to a delay in the diagnosis and risk of developing advanced disease with poor prognosis at the time of diagnosis (2).
Keyword : Colorectal carcinoma, pregnancy

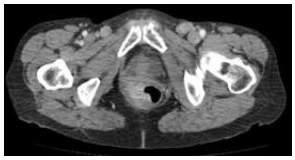
Introduction:

Colorectal carcinoma in pregnancy represents a serious threat to both mother and fetus(3). Colorectal carcinomas are uncommon during pregnancy and majority of patients present only in late stages of pregnancy. These tumors are usually distal in rectum (upto 85%cases) and within the reach of sigmoidoscope. To diagnose colon cancer earlier in pregnancy and thus improve prognosis in patients, a sigmoidoscopy needs to be performed(2).

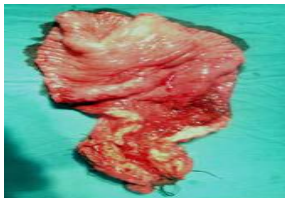
Case Report:

A 28yr old multiparous lady with 32weeks of intrauterine pregnancy complained of intermittent rectal bleeding during defecation over the past 3 months. She also experienced some pain while defecation, associated with lower abdominal pain and constipation. She was initially evaluated by her primary obstetrician who attributed the symptoms to hemorrhoids. Due to the persistent bleeding she presented at our emergency department and was referred to general surgery for further management. The physical examination at that time was unremarkable except for normal signs of pregnancy and pallor. On doing per rectal examination, a cauliflower like mass was located 4cm from anal verge extending 10cm proximally and the biopsy confirmed a low grade adenocarcinoma. There was no family history of colorectal, endometrial, breast or ovarian cancer. Except for hemoglobin 10.6%. other laboratory investigations which included liver function tests, carcino-embryonic antigen and basic chemistry profile were within normal limits. Metastasis work up could not be done. Since patient was at 32 weeks of pregnancy. Hence definitive treatment for carcinoma rectum was deferred. On consultation with obstetrician, a 2 staged procedure was planned. First, to continue the pregnancy for another week upto 33weeks and delivery along with sigmoid colostomy, in view of impending obstruction and then plan on tumor resection. Post delivery a CT scan was performed to help determine the exact location of tumor. This demonstrated a hypodense mass involving the anterior wall of the rectum compromising the lumen. Growth showed some adherence to left lateral wall. No significant nodal disease suscpicious for tumor involvement. No additional evidence of metastasic disease was found.





After 2 ½ weeks patient underwent an abdomino-perineal resection with hysterectomy and end colostomy. This gap of 2 1/2weeks allowed her pelvic venous congestion related to pregnancy to decrease. Macroscopic examination revealed an ulcerated growth involving entire circumference of bowel. It measures 7x 5x 4.5cm with raised borders. The lesion was located 2cm proximal to anal mucosa extending 10cm proximally. Cut surface shows a whitish friable growth involving muscle. Serosa appeared normal. The microscopic examination revealed low grade adenocarcinoma invading through muscularis propria into subserosa (pT3), none of the regional lymph nodes removed were positive for metastasis. Her disease was classified as Dukes B.



Discussion:

Colon cancer adversely affects pregnancy and only 75% cases resulted in healthy live borns(4). Colorectal cancer is seen rarely in young patients; hence these patients have strong predisposing factors in developing colon cancer (5). Such factors include hereditary nonpolyposis colorectal cancer (Lynch syndrome), familial adenomatous polyposis, Gardner's syndrome, and Peutz-jeghers syndrome. A review of 19 pregnant patients showed that 4 out of 9 patients had one of these strong predisposing factors for colon cancer by Girard et al(1). Diagnosis of patients with colorectal cancer includes 3 major components: Endoscopy with biopsy, Serum CEA, and abdominal imaging (2). Performing endoscopy in pregnant patients lead to adverse consequences like mechanical pressure applied uterus during the procedure causing placental abruption and fetal injury secondary to maternal hypoxia or hypotension during the procedure(6). Increased CEA levels prior to surgery indicate disseminated disease and increased recurrence. Ultrasound abdomen useful in detecting liver secondaries(7). Abdominal CT imaging is contraindicated in pregnancy due to radiation teratogenicity mainly in the first trimester. Instead MRI can be useful in staging the disease.(8) Careful assessment of tumor and cancer stage should be done to ensure tumor will not obstruct a normal labour and vaginal delivery. Management of colon cancer depends on the gestational age and tumor stage at time of diagnosis. Multidisciplinary involvement of obstetrician, perinatologist, colorectal surgeons and radiation and medical oncologists are needed to achieve goal of early delivery and early treatment of cancer (7).

During 1st half of pregnancy, colon resection with anastomosis is indicated for colon or appendiceal cancers. Up to 20weeks of gestation without disturbing the gravid uterus, a low anterior resection can be done. But in certain cases access to rectum can be obtained only after uterine evacuation or hysterectomy (7).In late pregnancy, a diverting colostomy may be necessary to relieve an impending obstruction and allows for fetal maturity before providing the definitive therapy. Some patients after 20weeks may opt for continuing the pregnancy to fetal vitality. Vaginal delivery is mostly preferred unless the tumor is obstructing the pelvis or if the tumor is located on the anterior rectum (7). Tumor resection can be accomplished immediately if cesarean delivery is done. The placenta should be carefully examined for metastasis. Chemotherapy is safe during 2nd and 3rd trimester of pregnancy, but chance of intrauterine growth restriction and prematurity is high. 5-FU is the primary chemotherapeutic agent for treatment of colorectal cancer(9). Radiation therapy is not recommended during pregnancy because of harm to the fetus.

Conclusion

Colorectal cancer in pregnancy is a diagnostic and therapeutic challenge. Since the presenting symptoms are same as during pregnancy, it leads to a delay in diagnosis of colorectal cancer unless in advanced stages. Sigmoidoscopy should be done to diagnose colon cancer early in pregnancy. The decision in management of colorectal cancer in pregnancy must take into account both life of the fetus and survival of mother. Hence a multidisciplinary approach is needed in its management.

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