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Carcinoma colon recurrence in anterior abdominal wall of pregnant patient – case report

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ABSTRACT

A 22 years old pregnant female of G2A1 presented as 38 weeks pregnancy with lower abdominal lump since 3 months. Initially painless, later had dull aching intermittent pain. Past history of exploratory Laparotomy for carcinoma of colon 1 year back. History of taken incomplete cycles of adjuvant chemotherapy was postoperatively. Per Abdominal examination showed 38 weeks uterus with a single globular mass of 6cms x 4cms situated just beneath the laparotomy scar in midline in suprapubic region. Firm in consistency, freely mobile but becomes less prominent on leg raising test. Ultrasound abdomen showed thick walled 6cms x 3.7cms hypoechoic space occupying mass with septations and internal degeneration suggestive of Abscess or Haematoma in anterior parietes of abdomen. Liver and other abdominal viscerae appeared normal. Fine Needle Aspiration Cytology revealed only blood elements. Emergency Lower Segment Caesarean Section done for fetal distress, abdominal mass of 12cms x 10cms x 8cms adherent to rectus sheath was excised. Patient delivered a live healthy female baby. Postoperative recovery was uneventful. Histopathology of excised mass revealed well encapsulated moderately differentiated adenocarcinoma (non mucous secreting).



Figure 1

Patient in supine position preoperatively showing suprapubic bulge of abdomen due to tumour mass



Figure 2

Excised tumour mass posterior surface

1. INTRODUCTION

The detection of primary or recurrent colorectal cancer during pregnancy is a rare event. Early diagnosis is difficult because symptoms are often attributed to pregnancy. Colorectal carcinoma which afflicts approximately 8 percent of women less than 40 years of age (Parker et al. 1996). Abdominal wall recurrences have been reported to occur in approximately 60 percent of patients with advanced colorectal cancer (Silecchia et al. 1990). The effect of parity on the incidence of colon carcinoma remains unclear (Peters et al. 2002) and the effect of pregnancy on colon carcinoma recurrence is even less well understood. Although very few cases of colon carcinoma occurring during pregnancy have been reported it seems that stage for stage, the survival of pregnant patients with colon carcinoma is similar to that of non pregnant patients with colon carcinoma (Bernstein et al. 1993). Incisional recurrence is uncommon, although likely underestimated following conventional treatment of colon carcinoma. Aggressive resection of disease restricted to the abdominal wall and associated adherent viscera can result in local disease control with little morbidity and no mortality (Koea et al. 2000). Yet abdominal wall metastases are often indicators of recurrent intra abdominal cancer. Certainly, timely diagnoses of abdominal wall lesion and possible concomitant intra abdominal disease are crucial to optimize patient management.

2. CASE REPORT

A 22 years old female presented with 38 weeks of pregnancy and with history of lump in lower abdomen since 3 months. Lump was painless to begin with and later developed dull aching pain intermittently. Past history reveals her married life of 2 years. She conceived in the first 3 months of her active married life and during her first trimester she developed intractable vomiting. On investigations like ultrasound abdomen and Barium enema, a mass in Transverse colon was confirmed (Figures 1-5). She underwent MTP and then referred to MNJ Institute of Oncology and Research Cancer Centre. In July 2005, patient was taken for exploratory laparotomy, transverse colectomy with end to end

anastomosis was done. Histopathology of colon mass was revealed adenocarcinoma of colon involving serosa. No mention of lymph node involvement or any distant metastases noted (retrospectively: T3, No, Mo=Stage IIA of AJCC and UICC). Patient advised for 6 cycles of adjuvant chemotherapy of 5FU and Leucovorin, but she took only 3 cycles and stopped. In December 2005, patient conceived for the second time and was under regular antenatal check up.

General examination was unremarkable, per abdominal examination revealed non-tender lump of size 6 cm x 4cm situated just beneath the laparotomy scar in midline, firm in consistency, freely mobile and becomes less prominent on leg raising test. Ultrasonography of abdomen and pelvis showed thick walled 6cm x 3.7cms hypoechoic mass with septations and internal degeneration seen suggestive of ?Abscess or Haematoma in the Anterior Parietes of Abdomen. Liver and other abdominal viscerae appeared normal. FNAC of mass showed only blood elements. Routine blood investigations were normal. X-ray chest was normal.

In August 2006, patient was taken for emergency LSCS due to indication of fetal distress. Exploratory laparotomy through an infra umbilical midline incision revealed mass of 12cms x 10cms x 8cms adherent to rectus sheath



Figure 3

Excised tumour mass anterior surface showing haemorrhagic spots

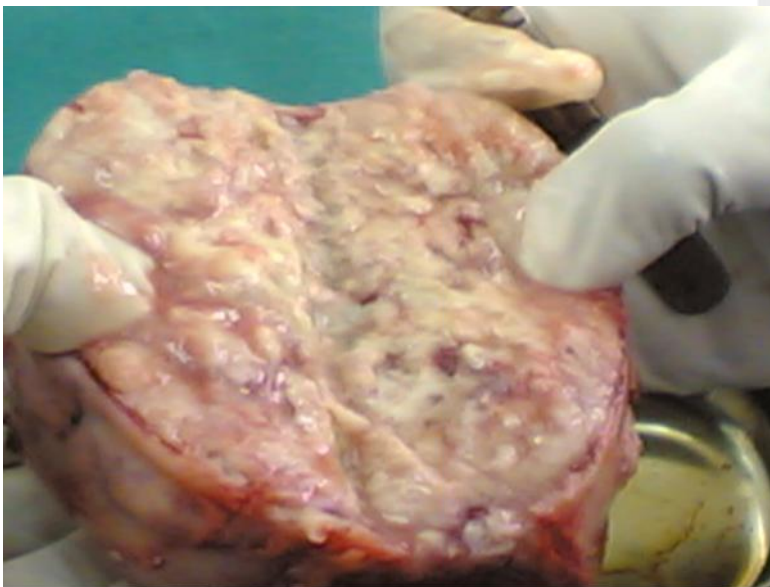


Figure 4

Cut Section of the tumour mass having necrotic material

anteriorly and extending to urinary bladder posteriorly. Mesenteric lymph nodes of ileum were enlarged. Mass was excised and a live healthy female baby was delivered. Post operatively recovery was uneventful.

Histopathology of tumour mass revealed well encapsulated moderately differentiated adenocarcinoma (Non Mucin secreting) with areas of papillary formation, necrosis, haemorrhage and secondary non specific inflammation. Patient was then referred to Cancer hospital for further relevant management.

3. DISCUSSION

This case shows a highly aggressive form of Colon carcinoma capable of rapid recurrence. Although it is unclear why this patient had such a rapid course, numerous factors may have played a role. Several studies have shown that patients younger than 45 years of age tend to present with advanced stages of colorectal carcinomas (Palmer et al. 1991). These patients also have a greater risk of developing mucinous lesions and are more likely to have local recurrence than older patients. Mucinous tumours themselves usually present at a more advanced stage have a greater incidence of lymph node involvement and have an overall poorer prognosis (Symonds, 1976). Although overall survival is similar when adjusted for Dukes Staging, young patients tend to present with more advanced tumours and hence have a lower survival rate (Palmer et al. 1991). This is particularly true for pregnant patients with colon carcinomas because symptoms and signs of colon carcinoma such as haematochezia, tenesmus, abdominal cramps, changes in bowel habits, nausea, vomiting may be similar to those of pregnancy causing a delay in diagnosis, advanced stage of presentation and poorer prognosis (Bernstein et al. 1993).

In our case, the patient refused adjuvant chemotherapy which may explain her recurrence. However, it does not explain why after being free of disease for one year she suddenly developed a recurrence during her second pregnancy. Although her recurrence occurred within the expected time, it is

conceivable that the hormonal changes from her pregnancy may have had a colonic growth promoting effect. Numerous studies have implicated pregnancy as a risk factor for development of breast cancer (Danforth, 1991), because estrogen, prolactin and growth hormone stimulate hyperplasia in human breast tissue and are elevated during pregnancy.

Others have shown that pregnancy may have a protective effect against the development of breast cancer. However, the effect of pregnancy on the incidence of colorectal carcinoma is unclear (Peters et al. 2002; Kvale. 1991) and on colorectal carcinoma recurrence is unknown. Classic determinants of colon carcinoma recurrence and survival include tumour stage and grade, number of positive lymph nodes, mucin production and lymphovascular invasion (Minsky, 1995). Environmental, genetic, hormonal and immunological factors may also influence tumour aggressiveness and prognosis (Sandler, 1996). Among the various hormonal changes of pregnancy, estrogen, progesterone and prolactin levels are uniformly elevated to enable gestation to proceed until parturition. However, these hormonal increases may also promote colon carcinoma progression. Because 30 – 67 percent and 10 – 100

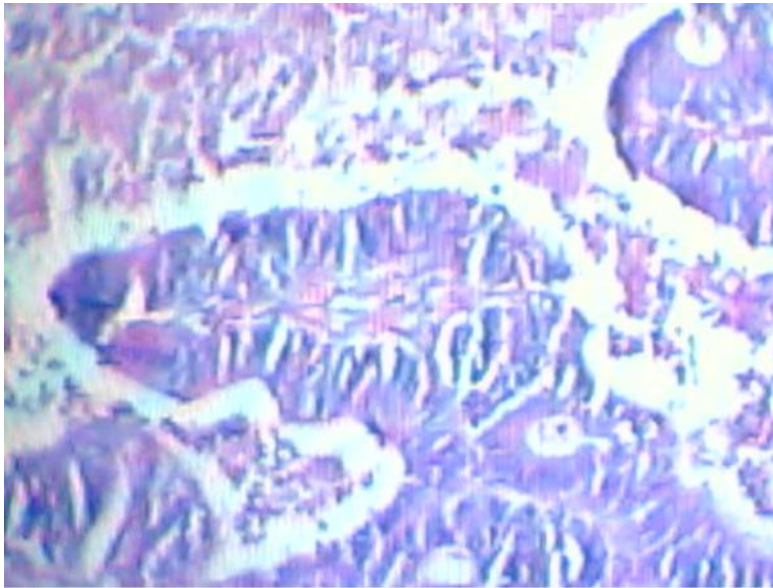


Figure 5

Histopathology slide showing adenocarcinoma of colon 40x

percent of colorectal tumours are estrogen receptor and progesterone receptor positive (Meggouh et al. 1991; Singh, 1993) respectively, a significant number of colorectal carcinomas may be susceptible to hormonal stimulation during pregnancy. In colorectal carcinoma estrogen receptor and progesterone receptor status may have no prognostic value, because in some cases levels have been found to be paradoxically lower than in surrounding normal mucosa (Di Leo et al. 1994). Because prolactin hormone and its receptor have been detected in colorectal carcinoma (Bhatavdekar et al. 1994) a relationship may exist between pregnancy related changes in serum prolactin levels and colorectal carcinoma risk. In pregnancy antigens such as MUC -1, a cell surface mucin overexpressed in different carcinomas, elicit a T cell proliferative response. This response not seen in nulliparous women is thought to provide an immunization like effect against breast cancer in multiparous women (Agarwal et al. 1995).

Wound recurrence is uncommon after conventional treatment of colorectal carcinoma but occurs with equal

frequency in B2, C1 and C2 disease. Laparotomy increases likelihood that recurrence involving abdominal wall and wounds will be identified. Wound recurrences are associated with an increased risk of diffuse peritoneal disease and a poor outcome (Terence Reilly et al. 1996). Because incidence of recurrent disease is greatest within the first two or three years after colorectal resection, it may be advisable for females in particular those with hormone receptor positive tumours to postpone pregnancy for this period of time (Puig La Calle J Jr et al. 1999). Further studies are necessary to identify clinicopathologic and immunologic features that may categorize a subset of women with colorectal carcinoma and high risk of pregnancy related recurrence. This should allow us to better understand the effects of pregnancy on colorectal carcinoma recurrences and to better counsel and manage female colorectal carcinoma patients during their reproductive years. Although preventive measures have been proposed (Curet, 2004), it seems likely that abdominal wall lesions will continue to present diagnostic challenges.

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