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Colorectal Malignancy During Pregnancy: Case series & Review in a Colorectal center in East Coast Malaysia

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Abstract
Malignancy during pregnancy is rare. Colorectal cancer in pregnancy is the 7th commonest cancer diagnosed in pregnancy (1,2,3). Patient usually present at advance stage during diagnosis as the symptoms are similar to that of pregnancy(2). Herein we present 3 case reports of patients from an East coast Colorectal center in Malaysia, who presented with colorectal cancer during pregnancy for the past 2 years. We review the literature and discuss the challenges in managing these patients.

Keywords: *colorectal cancer, pregnancy, malignancy*

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I. Introduction

Colorectal cancer is 3rd common cancer among women after breast and lung cancer. It is second most common cancer in Malaysia with an overall of 21.3 cases per 100000 populations from 2008 till 2013(3). It's a disease of middle age and elderly, and its rare among the younger population. It is even rare among the childbearing mothers with reported incidence is 1 in 18000 pregnancies to 1 in 50000 pregnancies (0.002 % - 0.005%) (3,6,9). However, the pattern of bowel malignancies in pregnancy expected to rise with women are getting pregnant later and decreasing trend in the age of colorectal cancer patient. In most literature review, only case report and limited studies have been published regarding colorectal cancer in pregnancy(6,911,12). We report three cases of ladies with colorectal cancer during pregnancy in this series, which we encountered in Hospital Raja Perempuan Zainab II, a colorectal center from 2019 till 2021.

II. Case Report

First case was a 34 years old Malay lady, gravida 4 para 3 who was admitted to the obstetrics ward for labor pain at 37 weeks of gestation. During assessment by gynae team, noted that she had a rectal mass. On further questioning she complained of altered bowel habit for 2 months with passing out pellet like stool once every 3 – 4 days. She also mentioned that it is associated with per rectal bleeding. She claimed that there was no family history of malignancy. She also mentioned that she thought it was normal as she had similar constipation and bleeding per rectal during her previous pregnancy. Therefore, she ignored the symptoms. She was then referred to our colorectal team and planned for workup after her delivery as she was in labor. She underwent and emergency lower segment caesarean section due to prolonged labor. She delivered a baby boy with 2500 g weight and Apgar score of 9 and 10 at 1 minute and 5 minutes respectively. She underwent colonoscopy on post-partum day 10 which showed a fungating tumor at 4 cm from anal verge occupying 1/3rd lumen with another pedunculated polyp at descending colon for which polypectomy was performed. Histopathology examination revealed tubular villous adenoma of the polyp and adenocarcinoma of the tumor. The remaining colon was normal. Staging contrast enhanced computer tomography confirm low rectal tumor with small peri-rectal nodes and no distant metastases. However, patient defaulted follow up and presented again three months later. She was treated as subacute intestinal obstruction as she presented with symptoms of obstruction but still able to pass flatus. She had loss about 8 kg during this past 3 months. Repeat CT TAP showed tumor extending into rectosigmoid junction with multiple pararectal nodes with right adenexal mass which was likely an enlarged lymph node. She underwent diversion proximal transverse colostomy and chemo port insertion. After MDT discussion, she underwent 30# of CCRT with 12 cycles of FOLFOX chemotherapy. Repeat CT scan showed stable rectal mass with reduction of lymph nodes. She was subjected to a laparotomy; however, the pelvic lymph nodes were adherent to the major vessel, therefore did not proceed with resection of tumour. She was counselled for second line chemotherapy, but patient defaulted follow up.

The second case was of a 41 years old lady G3 P2 presented at 29 weeks of gestation with complain of abdominal pain with constipation. She also had on and off PR bleeding. She was referred to surgical team TRO cause of abdominal pain. However, her pain improved with analgesia, and but also found to have had transverse

lie in labor, decision made for emergency caesarean section. During surgery , a complex mass was seen at the left lateral wall, general surgery team was called in, and it was a constricting sigmoid tumor 6X8 cm with adherence to the left ovary and fallopian tube. Patient underwent sigmoid colectomy with double barrel stoma and left salphingo-oopherectomy. Post operatively patient developed pulmonary embolism and treated with anti-coagulation. Patient was discharged well on post-operative day 10. Her staging CECT showed no distant metastases. HPE of resected specimen is T3N1M0 with no involvement of the ovary and fallopian tube. She completed her adjuvant chemotherapy of 12 cycles of FOLFOX. Her CEA level which was initially 3.6 and subsequently the level drop to 0.5 during her follow-up. She is planned for reversal of her stoma.

The last case was, 37 years old para 4, presented to surgical clinic at post-partum 2 months with alteration in bowel habit after her delivery. She had a SVD of a 3000g of full-term baby boy. She also complained of passing out mucoid like stools with blood. She had tenesmus and lost about 6 kg in the past two months. DRE showed circumferential mass 4 cm from anal verge. Her CEA level was 836.5. She underwent a colonoscopy which showed tumor at 4 cm with narrowed lumen but was able to negotiate the scope through. The rest of the bowel was normal until caecum. HPE revealed moderately differentiated adenocarcinoma. Her staging CECT scan showed low rectal tumor with extension into the mesorectal fat with poor plane with the uterus and multiple extensive lymph nodes involvement at the mesorecta and paracaval/paraaortic nodes. There was also bilateral liver and lung metastases. She underwent laparoscopic defunctioning stoma with chemo-port insertion. She only managed to undergo 2 cycles of palliative chemotherapy before she presented again in a month with abdominal distension due to ascites. She underwent pigtail drainage of her ascites, however her condition further deteriorated, and family requested to bring her home. She passed away the following day of her discharge.

III. Discussion

Colorectal carcinoma among childbearing mothers was first reported by Cruveilher in 1842(12,13,15,17). Among pregnant ladies' incidence of having cancer is about 1 in every 1000 pregnancies(3,5). Pregnancy associated malignancy is defined as malignancy during gestation or within twelve months after delivery(2,3,5). It is estimated about 1 in 3000 pregnancies, patient develop colorectal cancer, reported in 1992 and it's the 7th commonest cancer among the pregnant mothers(11,15,16). The mean age of colorectal cancer in pregnancy is 31 (16 – 48).

Mostly patients usually present with abdominal discomfort or pain, vomiting, constipation, per rectal bleeding and anemia(1,3,4,5,6,16). These symptoms can be attributed to pregnancy; hence patient usually overlooks it and presents to the physician at advance stage. Bleeding per rectal is assumed as hemorrhoids, as well as abdominal pain due to contraction pain, even by the physician(12,13) Unless a high index of suspicion which leads to further investigation on the symptoms, this patient will only be diagnose in advance stage of disease.

Management of the cancer only be instituted once the diagnosis has been established. Few basic investigations and examination are sufficient to diagnose before further confirmatory test. Most of the colorectal cancer in this group of patients are at lower rectum, which accounts for 86% of cases, therefore a simple digital rectal examination is sufficient to ascertain a palpable tumor (11,12,14). Endoscopy is the gold standard for diagnosing a colorectal cancer, flexible sigmoidoscopy which is less invasive and can be safely performed at second or 3rd trimester. Other mode of investigations such as ultrasound to look for liver metastases and MRI of abdomen are safe in pregnant women(3).

It is challenging to manage pregnant ladies with colorectal cancer, not only treating the mothers but also keeping in mind the welfare of the unborn child. There should be a group of physicians managing this patient which include the colorectal surgeon, oncologist, obstetrician, neonatologist, feto-maternal gynecologist and anesthesiologist. There are several factors that need detail in planning the treatment protocol, e.g., location of the tumor, presentation of patients either as an emergency or elective, stage of tumor, complications of pregnancy such as pre-eclampsia and placenta previa or complication of tumor such as perforation or obstruction and finally patients' decision and her gestational age(13,14,15,16).

Pregnant mothers at less than 20 weeks can safely undergo surgery, beyond this gestational week, it is advisable to delay for reasonable maturation of the fetus(1,2,6,7). After 36 weeks, the bowel operation can be performed after an uncomplicated caesarean section, with the patient in slight left lateral position to prevent uterus compressing the inferior vena cava. Adjuvant chemotherapy should be delayed until second or 3rd trimester. It should be administered in order to prevent recurrence or distant metastases. The choice of chemotherapy is FOLFOX regime(7,8,9). There is no role of radiation in pregnant mothers as it will affect the unborn child. However, treatment during post-partum can be offered after discussing with the patient regarding risk of possible infertility.

IV. Conclusion

In conclusion, colorectal cancer in pregnancy is a rare condition. High index of suspicion should be among the physician managing these patients in order to diagnose them in early stage and initiate the management, to save the child and the mother. Accurate diagnosis and prompt treatment is the foundation of successful management.

References:

[1]. Dahling MT, Xing G, Cress R, Danielsen B, Smith LH. Pregnancy associated colon and rectal cancer: perinatal and cancer outcomes. J Matern Fetal Neonatal Med 2009; 22:204–211

[2]. Pellino G, Simillis C, Kontovounisios C, et al: Colorectal cancer diagnosed during pregnancy:systemic review and treatment pathways. Eur J Gastreoenterology Hepatol. 2017, 29: 743-753

[3]. Radzi MAH, Khazim WWK, Othman Z, et al. The Second Annual Report of the National Cancer Patient Registry - Colorectal. Cancer. 2014; 2008 - 2013. Kuala Lumpur, Malaysia: National Cancer Patient Registry - Colorectal Cancer and Clinical Research Centre (CRC).

[4]. Cappell MS, Fox SR, Gorrepati N. Safety and efficacy of colonoscopy during pregnancy: an analysis of pregnancy outcome in 20 patients. J Reprod Med 2010;55:115–23.

[5]. Cruveilhier JJ. *Anatomie pathologique du corps humaine*. Volume 2. Paris, France: JB Baillière; 1829. p. 7-10.

[6]. Walsh C, Fazio VW. Cancer of the colon, rectum, and anus during pregnancy. The surgeon's perspective. Gastroenterol Clin North Am 1998;27(1):257-67

[7]. Cao S, Okekpe C, Dombrovsky I, et al. (May 24, 2020) Colorectal Cancer Diagnosed During Pregnancy With Delayed Treatment. Cureus 12(5): e8261. DOI 10.7759/cureus.8261

[8]. Makoshi et al. Chemotherapeutic treatment of colorectal cancer in pregnancy: case report; Journal of Medical Case Reports (2015) 9:140

[9]. ASGE Guideline: guidelines for endoscopy in pregnant and lactating women.Gastrointestinal endoscopy Volume 61, No. 3 : 2005

[10]. George P, Nicholas P. Cancer and pregnancy: Poena magna, not anymore; Euro Journal of Cancer 42(2006) 126 – 140.

[11]. Ciaran W, Victor W.F. Cancer of the the colon, rectum and anus during pregnancy, The surgeon's Perspective; Gastroenterology clinics of North America Vol 27. Num 1 March 1998

[12]. Yaghoobi M, Gideon K, Irena N. Challenges to diagnosing colorectal cancer during pregnancy; Canadian Family Physician Vol 55: Sept 2009.

[13]. Amarjothi J, Villalan R, Senthil K et al. Challenges associated with Colorectal cancer in pregnancy, Case Rep Gastroenterol 2019; 13: 253 -257.

[14]. Youzheng X, Beihua K, Keng S. Adenocarcinoma of the ascending colon in 31-year-old pregnant women; A case report. Medicine (2018) 97:51

[15]. Philippe M, Catherine U, Serge U. Cancer In pregnancy: a challenging conflict of interest. The Lancet Vol 379, Issue 9815, P495 – 496, Feb 11, 2012.

[16]. Ng CVT, Fitzgerald H, Qureshi A, Tan HJ, Low ML, Lim MK, Lo VC. J Cancer Treatment Diagn. (2017)**;** 1(1): 14-17

[17]. Girard RM, Lamarche J, Baillot R. Carcinoma of the colon associated with pregnancy: report of a case. Dis Colon Rectum 1981;24:473-475.

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