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Neglected and Persistent Vomiting of Pregnancy: Can it be Malignancy

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***Abstract*: Background: Nausea and vomiting is a common entity of pregnancy. 7 out of 10 women experience some level of NVP. Gastric cancer with pregnancy in one of a rarest cause of NVP complicating pregnancy worldwide. *Case:* A 25 years primigravida presented to Dr. Bhimrao Ambedkar Memorial hospital with severe IUGR and severe vomiting, tolerating liquid diet only. She was thin built, brittle discolored rough hairs with cracked lips and angular cheilosis. She had tachycardia but BP was normal. All her routine investigations were within normal range except mildly elevated liver enzymes. She was investigated for her persistent vomiting with consultation from physician and surgeon. USG whole abdomen was done to rule out other causes of vomiting which showed thickening of stomach wall. MRI suggested asymmetrical circumferential thickening of antropyloric region of stomach. Endoscopic biopsy showed diffuse infiltrative adenocarcinoma (signet ring cell). Her nutritional deficiency was managed. She had preterm vaginal delivery and baby was handed over after 35days of birth. She received neoadjuvant chemotherapy followed by surgery and radiotherapy and chemotherapy. She is living normal day to day life now. *Conclusion:* Severe, persistent and nonresponsive NVP associated with weight loss should be investigated vigilantly and thoroughly. Apart from other causes one of rarest cause i.e., gastric carcinoma should not be missed. Diagnosis in early stage and management can have better prognosis and prolong the life expectancy.**

***Keywords*: NVP, gastric carcinoma in pregnancy, Severe IUGR**

1. Introduction

Pregnancy is a physiological event in women life that leads to many physiological, psychological and social changes. Nausea and vomiting are common entity of pregnancy. 7 out of 10 women experience some level of NVP (1) which is mainly caused by changes in hormonal levels. NVP starts and ends in 1st trimester in most of the cases. Women who experience vomiting even upto 3rd trimester should raise a suspicion. Common causes of 3rd trimester vomiting include cholecystitis, gastroenteritis, GERD, pre-eclampsia/HELLP, drug induced vomiting, peptic ulcer. Gastric carcinoma is a rarest cause of NVP. Pregnancy associated gastric cancer is defined as diagnosis of gastric cancer during pregnancy or within 1 year of delivery. Gastric cancer with pregnancy in one of a rare finding complicating 0.026-0.1% of all pregnancy (2). Gastric cancer with pregnancy is often diagnosed very late and in advance stages due to negligence of symptoms and lack of appropriate suspicion by the treating health facility. Various risk factors known for gastric carcinoma include sex(male>female), age (more common after 45yrs.), smoking, ethnicity and geography (Eastern Asia), history of gastric ulcer, helicobacter pylori infection, immunosuppressive conditions (3,4). The clinical presentation of gastric carcinoma like vomiting, dyspepsia, hematemesis, melena, weight loss may be confused with similar presentations in pregnancy (4). A strong suspicion should be raised in non-responding cases of nausea and vomiting beyond 16weeks of gestation that do not respond to treatment available. Although gastric carcinoma is rare in females and before 30 years of age it must be included in differential diagnosis in cases of refractory NVP, as gastric cancer during pregnancy has got poor outcome. We hereby report a very interesting and rare case of gastric carcinoma which was diagnosed in 3rd trimester of pregnancy.

2. Case Report

A 25year primigravida at 34 weeks of singleton gestation presented to with severe IUGR to OPD at Dr. Bhimrao Ambedkar Memorial hospital associated with Pt. Jawaharlal Nehru Memorial Medical College. She complained of nausea and vomiting throughout pregnancy which was initially mild. Over passage of time, she was not able to tolerate solid food. Nausea and vomiting were so severe that she was able to take liquid diet only and also gave history of weight loss. She had no

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history of hematemesis or melena. She didn't have history of malignancy in the family. On admission her GC was average B.P.110/70mmHg, Pulse 98bpm, mild pallor+, oedema absent. She was thin built with brittle discolored rough hairs with cracked lips and angular cheilosis were also present, no visible dilated neck veins. On per-abdomen examination she had 24-26weeks of gestation, uterus was relaxed clinically liquor less FHS 132bpm, EBW 1-1.2kg.

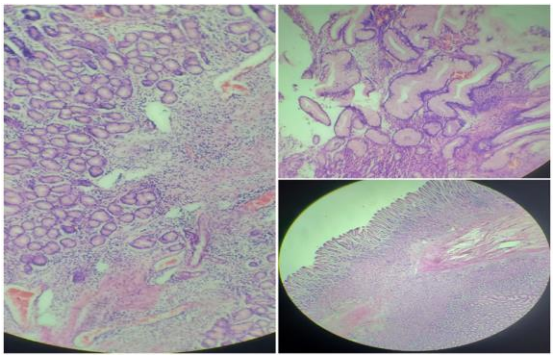

Fig. 1. Histology of signet ring carcinoma with penetration in different layer of stomach

Her investigations (CBC, RFT, S. Electrolyte, TSH, Urine routine and microscopy) were normal except mildly elevated liver enzymes. Foetal ultrasonography, Doppler analysis, and nonstress-test reported the foetus is doing well. Treatment started for nutritional deficiency and IUGR and corticosteroid coverage was also given for foetal lung maturity. For vomiting inj. Ondansetron 4mg 8hourly, inj. Metoclopramide 10mg 12hourly, tablet Doxylamine and syrup sucralfate 2tsf TDS was started but no response was seen. She was further investigated for persistent and non-responding vomiting with consultation from physician and surgeon. USG abdomen showed thickening of stomach wall, MRI – asymmetrical circumferential thickening of antropyloric region of stomach with metastatic lymph node at right gastro-epiploic and infra-pyloric region. Endoscopy demonstrated circumferential ulcero-infiltrative lumen occluding growth and biopsy was taken; showing diffuse infiltrative adenocarcinoma (signet ring cell). On the basis of all the above investigations she was diagnosed as stage II b CA Antrum (T2N2M0) and she was registered for chemotherapy.

Dilemmas were many like maternal and foetal outcome (severe IUGR and very low birth weight), continuation or termination of pregnancy and last but not least the mode of delivery with the growing tumour. As patient was already 35weeks +, she was planned for termination of pregnancy but she went into spontaneous labour and delivered vaginally 1.3kg, male child with APGAR score of 7/8. Placenta was sent for HPE (to rule out metastasis) which came out to be negative. Baby was admitted in NICU in view of very low birth weight and was discharged after 35days with no complications. During her postpartum period chemotherapy was started with Onco-surgery and Radiotherapy department consultations. She received 3 cycles of neo-adjuvant chemotherapy [oxaliplatin 85mg (day 1) + docetaxel 50mg(day1) + capecitabine 500mg (BD for 14days)] and was given filgrastim(rHu-CSF) 300mcg]. After that she had surgery - distal subtotal gastrectomy with D2 lymph node dissection. Her postoperative period was uneventful and was discharged on day 10.

Macroscopic examination revealed- 6*3.5*2.5cm growth in distal stomach. Histopathological examination demonstrated gastric carcinoma with signet -ring features, reaching up to serosa with no regional lymph node metastasis. (Signet ring cell adenocarcinoma 0/5 nodes. She is on regular follow up and have completed her radiotherapy and chemotherapy and tolerating complete oral diet. Post treatment her CT scan reported no obvious residual/ recurrence lesion.

3. Discussion

Cancer is one of a leading cause of mortality and morbidity worldwide. Association of pregnancy with malignancy is rare and often diagnosed late because of overlapping of symptoms with pregnancy that leads to diagnosis in advanced stage with fatal outcome of both mother and baby. The most common pregnancy associated cancer are cervical cancer, breast cancer, melanoma, lymphoma and leukaemia (5). Neoplastic cells are supported by estrogen, high prevalence to helicobacter pylori and increased blood circulation all of the above factors associated with pregnancy contribute to gastric carcinoma in pregnancy (6). With multiple risk factor and unknown etiology, younger cases have preponderance to female and poorer outcome. Apart from USG and MRI, endoscopic screening should be advised as it is low risk procedure in pregnancy with least maternal and foetal effects (4). Ueo et al reported that the 3-year survival rate for pregnant women with gastric cancer was 21.1% (7). Gastric cancer is a curable disease provided it is detected at an appropriate stage and treated adequately, similar to the case being reported. She is on follow up in the last one year and she is disease free now, enjoying motherhood. Metastasis of a malignant tumour to the placenta or to the baby is extremely rare, and the literature contains only 67 such cases. Most common among these are malignant melanomas (8). In this case HPE report of placental tissue came out to be negative and baby have completed 1st year of life disease free.

She was treated for severe and extended hyperemesis gravidarum the most common and probable cause for her clinical status. In case of persistent and nonresponding even rare causes of vomiting like CA antrum (stomach) should be kept in mind and ruled out for early diagnosis and better prognosis. She herself delayed presenting to the hospital, as she considered the symptomatology to be "normal". 5-year survival in young females diagnosed with gastric cancer during pregnancy greatly vary according to staging at the time of diagnosis as well as on type of cancer cells. Treatment of Gastric carcinoma associated with pregnancy is same as that of gastric carcinoma in any other patient. The treatment plan should take into consideration both the clinical stage and gestational age. However, it may affect foetal outcome but that should not delay the onset of treatment. With our determination to manage she was diagnosed as CA Antrum stage II and soon had spontaneous preterm vaginal delivery. The patient has signed the informed consent for the academic use of the medical data.

4. Conclusion

Awareness, a hope of future, to diagnose and cure.

A common belief is that nausea and vomiting is bound to happen in all women during pregnancy. Sometimes this thought is linked with gender of the baby and likes or dislikes of food. Above convictions are so strong and deep routed that even severe cases of NVP are left aside without seeking treatment. This not only compromises day to day activities of pregnant women but in long run may lead to severe IUGR as seen in our case apart from other stigmas. Severe, persistent and non-responsive NVP associated with weight loss should be investigated vigilantly and thoroughly. We are living in the era of modalities which are easily available, accessible and relatively safe in pregnancy. All possible cause even the rare ones and one of rarest cause i.e., gastric carcinoma should not be missed. Diagnosis in early stage and management can have better prognosis and prolong the life expectancy of women to let her enjoy greatest happiness of motherhood.

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