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## Carcinoma larynx in pregnancy: A case report

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### Abstract

Cancer complicates approximately 0.1% of all pregnancies. Head and neck cancer during pregnancy is uncommon. Specifically, laryngeal cancer in pregnancy has only been previously reported 10 times. From a maternal outcome perspective, 60% of laryngeal cancer during pregnancy cases reported recurrence-free survival. Patient should be counseled on the risk for potential disease recurrence after treatment and delivery.

Thus pregnant cancer patients should be treated in a multidisciplinary setting with access to maternal and neonatal intensive care units.

**Keywords:** Pregnancy, carcinoma, maternal outcome

### Introduction

The coincidence of malignant diseases during pregnancy is uncommon. Cancer complicates approximately 0.1% of all pregnancies. Head and neck cancer during pregnancy is uncommon. Specifically, laryngeal cancer in pregnancy has only been previously reported 10 times<sup>[3]</sup>. The management of head and neck cancers during pregnancy requires additional pregnancy-related understanding of the aetiological effect of pregnancy on cancer, knowledge of the direct and indirect effects of cancer on pregnancy, and the effect of diagnostic and treatment modalities on pregnancy. A multidisciplinary approach is needed to enable parents and clinicians to make the best clinical decision. In head and neck cancers, pregnancy has no effect on maternal prognosis when compared to non-pregnant patients matched by age, cancer stage and treatment<sup>[4]</sup>.

### Case Report

Mrs. ABC 26 years old female(G<sub>2</sub>P<sub>1</sub>L<sub>1</sub>A<sub>0</sub>) presented to the ENT OPD, at 30 weeks 3 days of pregnancy, with chief complaints of pain in the throat, change in quality of voice and difficulty in swallowing for the past three months and with difficulty in breathing for the past 2-3 days. She also had a history of loss of weight and appetite for the past three months.

She has been married for four years and has a history of cesarean section done in the previous pregnancy in view of failed induction at a government hospital in Rohru two and a half years back.

The antenatal period so far had been uneventful till the development of the above mentioned complaints in the second trimester.

Patient was admitted to the ENT department on 8th February. On admission the vitals of the patient were stable with a blood pressure of 110/70 mmHg in the right arm in sitting position, pulse rate of 80 beats per min regular, respiratory rate of 18 breaths per min with a saturation of 95% on room air. She underwent further examination and evaluation in the form of complete blood work up, which was within normal limits.

### On general physical examination

The patient was calm, conscious and well oriented to time place and person with an average built and a BMI of 22kg/m<sup>2</sup>.

### On per abdomen examination

Inspection: Abdomen was distended, with evidence of a well healed pfannenstien scar, striae gravidarum and linea nigra. There was no evidence of any dilated veins. All quadrants moved equally with respiration.

### Palpation

**Height of uterus:** 30 weeks of gestation, uterus was relaxed, non-tender, presentation of the foetus was cephalic liquor seemed adequate and there was no scar tenderness.

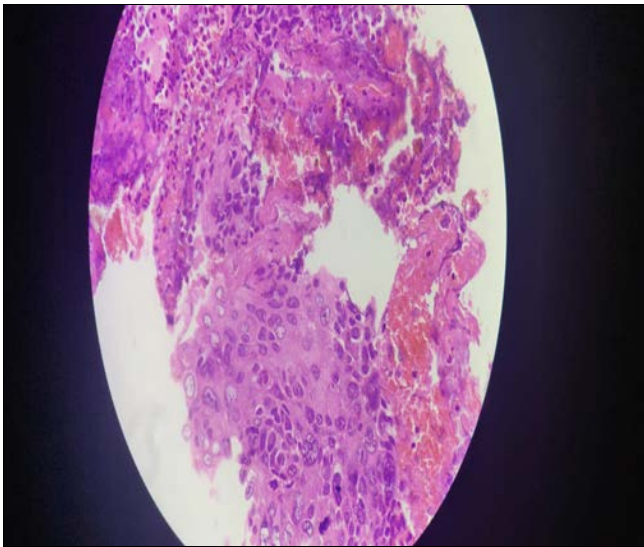
**Auscultation:** Foetal heart was present (134 beats per minute)

### Head and Neck

1. The laryngeal contour was within normal limits.
2. Laryngeal crepitus was absent
3. There was presence of cervical lymphadenopathy on the left side at level III of size 3x2 cm which was firm, non-tender and mobile.
4. ENT opinion was sought and on the advice of the consulting doctor she underwent nasopharyngoscopy and bronchoscopy.

**Nasopharyngoscopy:** Ulceroproliferative growth present on bilateral false vocal cord, bilateral arytenoids, bilateral aryepiglottic folds and post cricoid region. Bilateral true vocal cords were not visualised and the glottic chink was narrow. Fine needle aspiration was done from the lymph node (on the left side at level III) and sent for cytology. The histopathological report confirmed the presence of moderately differentiated squamous cell carcinoma. (Figure 1).

She underwent an MRI scan of the head and neck and an obstetric scan for fetal well-being was done.



**Fig 1:** Histopathology report

**On MRI:** Irregular asymmetric T2 hyperintense mass lesion measuring 28x37x33 mm (APXTRXCC) was seen in the hypopharynx and supraglottic region obliterating bilateral pyriform sinuses involving the bilateral aryepiglottic fold, bilateral false vocal cord and appeared to involve the postero-superior aspect of true vocal cord with obliteration of prevertebral space at the level of C6 vertebrae and T2 hyperintensity involving the C6 vertebral body. No extension to the base of the tongue was seen.

Multiple enlarged lymph nodes seen in left station II, III largest 20x36mm. Bilateral palatine tonsils appeared T2 hyperintense and symmetrically enlarged. (Figure 2).

She was scheduled for elective tracheostomy followed by direct laryngoscopic examination.



**Fig 2:** MRI Sagittal View

**Stage:** T3 N1 M0

After consultation with the department of oncology and the department of obstetrics and gynecology, it was decided that the patient was to be planned for an elective cesarean section at 34 weeks of gestation after which the patient was to receive chemoradiation.

She was admitted in the department of obstetrics and gynecology, where she was given steroid cover for lung maturation of the fetus and she underwent ultrasonography for fetal being. She delivered a healthy female child weighing 2000 g and was then referred to oncology to undergo upper gastrointestinal endoscopy and then to be started on radiotherapy.

Patient has currently received 5 cycles of chemoradiation. She is doing well and is undergoing further treatment in Chandigarh.

### Discussion

Cancer during pregnancy is uncommon, occurring in one out of every thousand pregnancies, making head and neck cancers during pregnancy an especially rare occurrence.

Also there is the fact that chemotherapy and radiotherapy that would normally be given to a patient with a T3 N1 M0 supraglottic squamous cell carcinoma, would not be appropriate in a pregnant patient due to their associated maternal and fetal risks [3].

Radiotherapy during pregnancy might cause harm to the developing fetus. Generally, pregnant women with malignant diseases are advised to delay radiotherapy until after delivery. The expected radiation effects, such as mental retardation and organ malformations probably only arise above a threshold dose of 0.1–0.2 Gy. This threshold dose is not generally reached with curative radiotherapy during pregnancy, provided that tumors are located sufficiently far from the fetus and that precautions have been taken to protect the unborn child against leakage radiation and collimator scatter of the teletherapy machine; such precautions also reduce the risk of radiation-induced childhood

cancer and leukemia in the unborn child [2].

From a maternal outcome perspective, 60% of laryngeal cancer during pregnancy cases reported recurrence-free survival. The remaining cases unfortunately reported local recurrence and one case of distant metastasis causing patient death. All cases that reported on neonatal outcomes reported a healthy delivery and survival of the neonate following delivery. Hence in future cases of laryngeal cancer during pregnancy, mothers may be counseled about the successful neonatal survival in previous cases. They must however also be counseled on the risk for potential disease recurrence after treatment and delivery.

### Conclusion

Though head and neck cancer with pregnancy is rare, it does occur. In such a scenario, there is a need for consultation with multiple specialities namely oncology, ENT surgeon, anesthetist and obstetrician in addition to keeping the needs of the patient and the family in mind. In this case, once the diagnosis was made, an adequate airway for the mother was ensured so that there was no difficulty during anesthesia. Thus pregnant cancer patients should be treated in a multidisciplinary setting with access to maternal and neonatal intensive care units.

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**Informed Consent:** Has been taken

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