LETTER

Recurrent pneumothorax in a pregnant woman with a family history of spontaneous pneumothorax

Dear Editor,

Spontaneous pneumothorax (SP) although rare during pregnancy is dangerous as any impairment in ventilation may lead to hypoxia with serious effect on fetal oxygenation[1]. We report the recurrence of SP in the third trimester of pregnancy involving the contralateral, of the previously surgically treated, hemithorax in a woman with a family history of SP.

A 36-year-old woman, gravida 3, para 2, at 36 weeks of gestation, was admitted with dyspnea and pleuritic chest pain. She reported a previously uneventful pregnancy after natural conception. She was a non-smoker with no previous history of asthma or bronchiectasis. She had a history of left SP for which she underwent video-assisted pleurodesis and removal of the apical part of the upper lobe. She reported a family history of SPs involving her mother, grandmother and another male member of her family. Her mother had two episodes of SP while her grandmother experienced four episodes of SP and were both treated with tube insertion without surgical pleurodesis.

On admission, she had no temperature, blood pressure was 140/70 mmHg, had regular pulse at 120 beats/min, respiratory rate of 26 breaths/min, and oxygen saturation 92%. Chest auscultation revealed the absence of breath sounds in the right hemithorax while chest x-ray showed total right side pneumothorax without shifting of the mediastinum. Abdominal examination showed a normal sized uterus with a fetal heart rate at 150 beats/min, and the non-stress-test was reassuring with no uterine activity. A chest tube was placed and connected to suction.

At 38 weeks and two days of gestation, a 2,720 gr female neonate with normal APGAR score was delivered by caesarean section under epidural anesthesia (due to maternal request despite been informed that she could undergo normal vaginal delivery). Her postpartum course was uneventful. On the 3rd postpartum day, a chest x-ray was performed, and the tube was removed. Due to her personal history of recurrent pneumothorax and her strong family history, it was recommended that she should undergo surgical pleurodesis as the definitive future management.

Laboratory tests were done in the three individuals, but alpha 1-antitrypsin deficiency or HLAA2B40 were not found. Although HLAB27 was found in all three individuals, it couldn't establish the occurrence of familial SP as the fourth subject and the other family members couldn't be examined. The sputum was negative for acid-fast bacilli and rheumatic factor, anti-nuclear factor, and complement C3 were within normal range while immunoglobulins were not reduced.

SP can occur during pregnancy, 25% in the first trimester, 22% in the second, and 53% in the third trimester and the recurrence rate is estimated at 44%[1,2]. As a diagnosis, SP has to be differentiated from pulmonary embolism eclampsia, epilepsy, cerebral hemorrhage and pulmonary lymphangioleiomyomatosis[1]. There is not a consensus on the appropriate management of SP during pregnancy besides the initial treatment with simple observation, intercostal drainage and elective assisted delivery under regional anesthesia at or near term[3]. Based on guidelines state Level D the recommended therapy in case of recurrent or persistent pneumothorax is surgical treatment. If surgical intervention, either video-assisted thoracoscopic surgery (VATS) or thoracotomy in pregnancy, can be avoided it is preferable because it reduces the risk of pregnancy complications such as preterm labor[3].

References

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Conflict of interest

None.

Keywords: Spontaneous pneumothorax, recurrence, pregnancy, family history, complications

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