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CASE REPORT

HAMMAN'S SYNDROME: A RARE ENTITY

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ABSTRACT: Hamman's syndrome is a rare entity, also known as Macklin's syndrome, a syndrome of spontaneous subcutaneous emphysema and pneumomediastinum. We report an unusual case of a young female patient presenting with breathlessness and chest pain of sudden onset, gradually progressive in nature and with history of bronchial asthma for last 8 years, along with other investigations. Chest x ray and computerized tomography was and later diagnosed as Hamman's syndrome.

KEYWORDS: Hamman's Syndrome, Breathlessness, Chest Pain, Chest X- Ray, Computerized Tomography,

INTRODUCTION: Hamman's syndrome also known as Macklin's syndrome. It is a syndrome of spontaneous subcutaneous emphysema and pneumomediastinum and sometimes it is associated with pain and less commonly associated with dyspnea, dysphonia, and low grade fever.

Spontaneous pneumomediastinum is not a common medical condition seen in the emergency department.

It is approximately seen in 1 in 30, 000 emergency epartment referals. Though it is a benign and self-limiting condition, it may leads to a number of investigations due to possibility of a potentially serious condition such as a rupture of any of the viscera or simply because of misdiagnosis. It rarely leads to any complication.

The condition was described by Louis Hamman and hence known as Hamman's syndrome.

CASE REPORT PRESENTATION: A 18 year old female patient was referred to our Emergency department with complaints of breathlessness and chest pain of sudden in onset, gradually progressive in nature. The patient also gives history of bronchial asthma for last 8 years. There was no history of trauma, foreign body ingestion or prior history of such episodes.

On examination Vital signs were found to be within normal limits. Routine laboratory evaluations revealed no abnormality. Physical examination revealed extensive subcutaneous emphysema and chest x- ray was remarkable for presence of diffuse subcutaneous emphysema. There were no abnormal auscultatory findings on respiratory and cardiac examination.

A Computerized Tomography scan of the neck and chest confirmed the presence of pneumomediastinum, pneumorachis (rarely seen) and extensive soft tissue emphysema in the cervical region seen extending upto the lower abdomen.

No obvious esophageal or tracheolaryngeal perforation or fistula was present. After ruling out all other conditions, she was diagnosed as having Hamman's syndrome

Patient was admitted for 3 days under medical observation and received conservative treatment, including rest, unrestricted diet, and analgesics and got discharged without any complications.

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Patient was followed up for 1 week. Follow-up chest X-rays revealed a reduction in the subcutaneous emphysema and other symptoms.

DISCUSSION: Hamman's syndrome is a rare entity and is also known as Spontaneous pneumomediastinum. It is defined as the presence of free air in the mediastinum, being unrelated to trauma or procedures.[1]

Mostly benign, many patients do not seek medical treatment and often spontaneous mediastinum goes undiagnosed.[1]

It is usually idiopathic in nature. The pathophysiology was described by Charles C. Macklin in 1939.

It is said that it can be due to barotrauma leading to the rupture of alveolar membranes causing a positive pressure gradient of air from the lungs into the mediastinum (the Macklin effect) other possibility is due to excessive duration or intense activities that mimic Valsalva maneuver's like pregnancy.

Indeed it is estimated to occur in approximately 1 in 100, 000 live births and is associated with prolonged labor times.

Main clinical features precipitating hamman's syndrome are vomiting and coughing. Hamman's is also seen associated with asthma which may cause frequent coughing as in our case and also in other conditions like alcohol abuse, interstitial lung disease, pulmonary emphysema, bronchiectasis and intrathoracic malignancies.

In our case chest X-rays was used for follow-up, the diagnosis having been established by CT, which is considered as the gold standard for the diagnosis of Hamman's syndrome.

CONCLUSION: Even though Hamman's syndrome is a rare entity, unawareness with this entity can lead to unnecessary diagnostic tests and inappropriate treatment.

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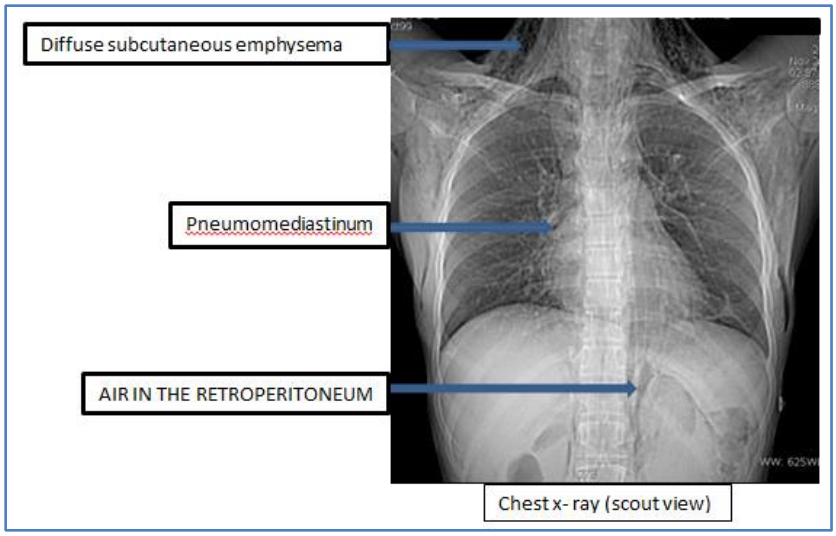

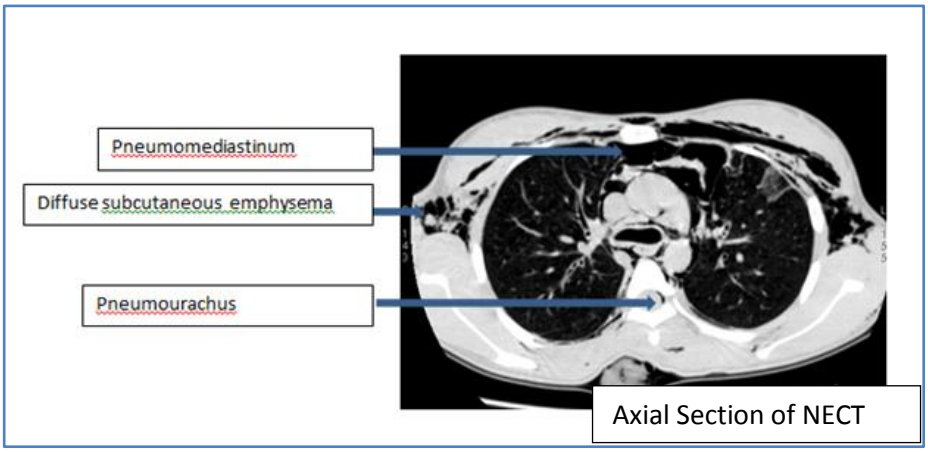

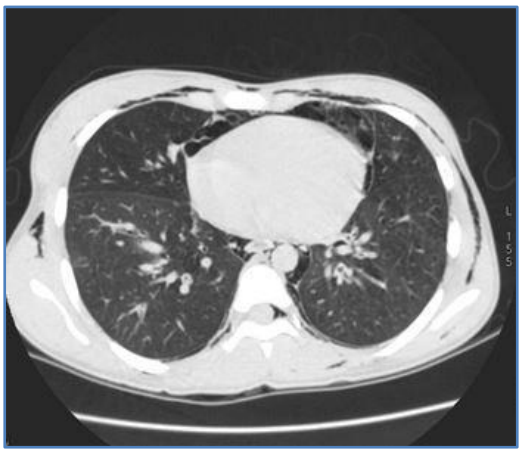

CT CHEST Axial view showing subcutaneous emphysema, pneumomediastinum and pneumorachis

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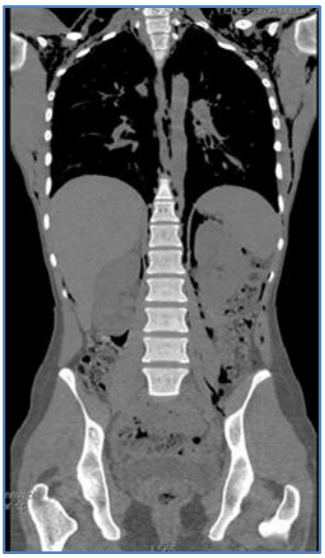
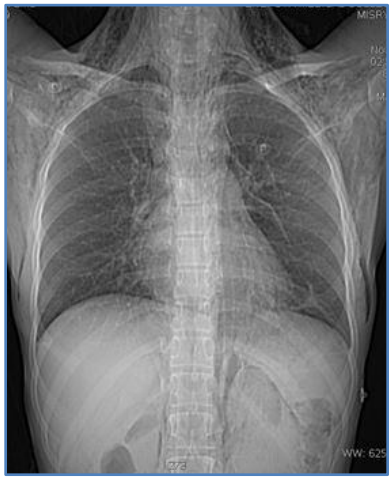


Coronal section NECT Showing diffuse subcutaneous emphysema, pneumomediastinum and air in the retroperitoneum



CT Chest scout view showing diffuse subcutaneous emphysema and air in the retroperitoneum

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