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RESEARCH ARTICLE

FACE AND TRUNK EDEMA IN ONCOLOGY ; ALWAYS PERFORM AN CHEST CT SCAN.

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Abstract

Spontaneous secondary pneumothorax occurs in patients with known pulmonary pathology.
It requires a fast and adequate care because can engage the prognosis. (1)different therapeutic approaches are used for the management of pneumothorax: exsufflation, chest drainage and other more invasive methods. (2)
We report the case of a patient followed for pulmonary neoplasia, treated for a vena cava syndrom without any imaging and which returned 2 weeks later with an aggravation of his edema and respiratory state because of a bilateral unknown pneumothorax.
in litteraure we find that , most SVC syndromes are associated with advanced malignant diseases that cause invasion of the venous intima or an extrinsic mass effect. Lung, breast and mediastinal neoplasms are common causes of SVC syndrome.
SVC syndrome can lead to the formation of pleural effusion . Numerous case reports have described pleural effusions in conjunction with the SVC syndrome. These effusions occur in 60% of SVC syndrome cases (3)
We didn't found much informations about pneumothorax complicating the SVC syndrome , especially in lung neoplasia.
Treatment of SVC syndrome is divided into supportive and definitive therapy. An obvious therapeutic manoeuvre is to elevate the patient's head to decrease the hydrostatic pressure and thereby the edema. There are no data documenting the effectiveness of this manoeuvre, but it is simple and without risk. Glucocorticoid therapy (dexamethasone, 4 mg every 6 h) is commonly prescribed.
There are different therapeutic approaches for the management of pneumothorax: manual exsufflation, conventional chest drainage and other more invasive methods.
Our patient was treated for vena cava syndrome, without any imaging at first , hence the interest of this work .
Thoracic CT scan allows diagnosis and the treatment remains controversial mainly by thoracic drainage.
prognosis in patients with non-small cell lung cancer. Many clinical trials show no significant difference in the rate of relief from the SVC syndrome whether chemotherapy, radiotherapy, or chemotherapy with radiotherapy was used.

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Introduction:-

Spontaneous secondary pneumothorax occurs in patients with known pulmonary pathology.

It requires a fast and adequate care because can engage the prognosis. (1)different therapeutic approaches are used for the management of pneumothorax: exsufflation, chest drainage and other more invasive methods. (2)

We will present the case of a patient followed for pulmonary neoplasia, treated for a vena cava syndrom without any imaging and which returned 2 weeks later with an aggravation of his edema and respiratory state because of a bilateral unknown pneumothorax. We just want to add that the patient has given us permission to publish his case .

Case report :

Mr A G , 50 years old. followed for pulmonary tumor process.

The patient consults in emergencies, for edema of the face with dyspnea , the emergency doctor after stabilizing him with low-flow oxygen and direct injectable intravenous prednisolone, sent patient home with a prescription of corticotherapy and anticoagulant for a suspiction of a vena cava syndrom.

the patient returned to emergency twice after , but the emergency doctor didn't realize any imaging.

Two weeks after that, the patient return to the hospital with a generalized edema and worsening of his respiratory state. The patient was admitted to care unit, and was stabilized using a chest tube to evacuate the left pneumothorax showed in the X ray, Then a chest CT scan was performed witch objectified the presence of a right pneumothorax with a left pleural tube in good position **. Fig 1**

Fig 1:-patient after evacuation of the left pneumothorax

A right chest drain was performed after that and then we realized a Chest X-RAY witch showed a good evolution, with total disbelief of the clinical edema. **Fig2** The patient left the UCI the following day .

Fig 2:-patient after treatment of his pneumothorax

Discussion:-

Superior vena cava (SVC) syndrome was originally described as being secondary to an infection, such as tuberculosis, or a syphilitic aortic aneurysm. Currently, SVC syndrome is generally due to cancer or thrombotic events.

Most SVC syndromes are associated with advanced malignant diseases that cause invasion of the venous intima or an extrinsic mass effect. Lung, breast and mediastinal neoplasms are common causes of SVC syndrome.

To understand the clinical manifestations of the syndrome, an appreciation of the regional anatomy is necessary. Because the venous drainage from the upper extremities, upper thorax and head is obstructed, SVC syndrome presents with symptoms related to engorgement of these areas. Both the degree of SVC compromise and the extent of collateral veins determine the varied clinical presentation, which can be as mild as slight facial and upper extremity edema or as dire as intracranial swelling, seizures, hemodynamic instability and tracheal obstruction. The rapidity of onset of symptoms and signs from SVC obstruction is dependent upon the rate at which complete obstruction of the SVC occurs in relation to the recruitment of venous collaterals. (3)

SVC syndrome can lead to the formation of downhill esophageal varices and pleural effusion . Numerous case reports have described pleural effusions in conjunction with the SVC syndrome. These effusions occur in 60% of SVC syndrome cases (3)

We didn't found much informations about pneumothorax complicating the SVC syndrome , especially in lung neoplasia cases where the occuring of pneumothorax isn't that rare.

In 1983, Hillerd and al found that there is only a single case of spontaneous pneumothorax revealing the pathology out of 4710 patients presenting mesothelioma [4], The following year, Law described 3 cases out of 140 (2%). [5] According to Boutin et al. , the frequency of pneumothorax revealing malignant pleural mesothelioma is estimated at 1% .[6]

The mechanism producing pneumothorax from lung cancer is not well understood, but a number of theories have been advanced. The first is that it may be the result of tumor necrosis – rupture of the necrotic neoplastic tissue in the pleural cavity ; the second, that it may be caused by the rupture of the necrotic tumor nodule or necrosis of subpleural metastases . A third is cancer of the check valve mechanism: the tumor at the lung periphery can obstruct

bronchioles and lead to local overdistention and rupture of the lung . The fourth is that most patients with lung cancer have chronic bronchitis or emphysema bullae and these bullae may rupture following the disturbance of the lung architecture due to bronchial cancer . (7)

Treatment of SVC syndrome is divided into supportive and definitive therapy. An obvious therapeutic manoeuvre is to elevate the patient's head to decrease the hydrostatic pressure and thereby the edema. There are no data documenting the effectiveness of this manoeuvre, but it is simple and without risk. Glucocorticoid therapy (dexamethasone, 4 mg every 6 h) is commonly prescribed, although its effects have not been formally well studied. Loop diuretics are also commonly used, but it is unclear whether venous pressure distal to the obstruction is affected by small changes in right atrial pressure. (3)

There are different therapeutic approaches for the management of pneumothorax: manual exsufflation, conventional chest drainage and other more invasive methods. (2)

The choice of the therapeutic remains controversial, however a etiological treatment must be started as soon as possible. Chest drainage is always indicated. In case of failure or recurrence, chemical pleurodesis and surgery are indicated, sometimes even from the outset. (8-9)

SVC obstruction even without a pneumothorax is a strong predictor of poor prognosis in patients with non-small cell lung cancer. Many clinical trials show no significant difference in the rate of relief from the SVC syndrome whether chemotherapy, radiotherapy, or chemotherapy with radiotherapy was used.(3)

Conclusion:-

SVC syndrome is most frequently encountered in patients with malignancies (especially in patients with lung cancer). Patients typically present with shortness of breath along with facial and upper extremity edema.

This case shows the interest of imaging for the diagnosis of respiratory distress, especially for a neoplastic patient. our patient was treated for vena cava syndrome, without any imaging at first , hence the interest of this work .

Thoracic CT scan allows diagnosis and the treatment remains controversial mainly by thoracic drainage.

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