Answer to Medical Quiz - 2

REFAYA TASNIM[1], QUAZI TARIKUL ISLAM[2]

Answers

Answer 01:

Chest x-ray PA view showing-

1. A well circumscribed homogenous radio-opaque shadow involving the whole of the left upper zone including apex.
2. Left costo-phrenic angle is mildly obliterated indicating mild effusion

CT scan of the chest axial view: showing dense homogenous consolidation with a biopsy needle in.

Answer 02:

Pancoast syndrome with SIADH due to-

- Bronchogenic carcinoma of left apical lung
- Tuberculosis
- Chronic lung abscess
- Carcinoid tumor

Answer 03:

1. CT/ USG guided core biopsy of the lesion and histopathological examination
2. MRI of the neck, chest and upper abdomen after the diagnosis to identify the extent of vascular and brachial plexus involvement.

Answer 04:

1. Severe hyponatremia
2. Hypercalcemia
3. Metastasis to the brain

Review:

Superior sulcus tumors (SSTs), also known as Pancoast tumors, are a clinically distinctive and difficult subtype of non-small cell lung cancer (NSCLC), accounting for fewer than 5% of all lung cancers[1].

Pancoast tumors, located peripherally, often lead to delayed diagnosis due to their minimization of typical lung cancer symptoms like cough, hemoptysis, and dyspnea[1]. Pancoast-Tobias syndrome is a clinical condition characterized by severe and unremitting shoulder and arm pain along with the distribution of the C8, T1, and T2 dermatome, Horner's syndrome, and atrophy of the intrinsic hand muscles[1,2].

Diagnosis involves mass biopsy, often through CT or ultrasound-guided fine-needle aspiration due to the peripheral tumor location. Fiberoptic bronchoscopy is effective in less than 30% of cases unless there is nodal involvement. Video-assisted thoracoscopy (VATS) or axillary minithoracotomy may be considered for tissue diagnosis when other methods yield negative results or to rule out pleural metastatic disease[1].

Pancoast tumors are typically classified as T3 or T4, with most being T3 due to chest wall or sympathetic chain invasion. T4 tumors extend to brachial plexus, vertebral bodies, and vascular structures. Prognosis is generally poor, especially with metastases to mediastinal nodes (N2 disease), resulting in less than 10% 5-year survival. 2013 ACCP guidelines recommend pre-surgery evaluation for N2/N3 disease via endobronchial ultrasound or cervical mediastinoscopy, even in the absence of involved nodes in CT or PET scans[1]. Despite surgery, quality of life is low, and the pain from the surgery can be crippling. Radiation therapy shows no significant improvement in locoregional recurrence or long-term survival[2].

References:

1. Bhattacharya PK. Pancoast Tumor. BMJ Case Reports. 2023
2. Elsaka O, Noureldean MA, Gamil MA, Ghazali MT, Abd Al-Razik AH, Hisham D. Pathophysiology, Investigations, and Management in Cases of Pancoast Tumor. Asian Research Journal of Current Science. 2022 Jan 25:83-100.