

中文題目：小細胞癌合併上腔靜脈症候群造成之急性心肌梗塞：病例報告

英文題目：Acute Myocardial Infarction Caused by Small Cell Carcinoma Combined with Superior Vena Cava Syndrome: a Case Report.

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Introduce

Small cell carcinoma is the most common extrinsic cause of superior vena cava (SVC) syndrome. It is a potentially life-threatening medical condition and might present with shortness of breath, swelling of the upper body of the head and even conscious disturbance. We also know that small cell lung cancer is a neuroendocrine tumor, which secrete excessive amounts of hormones to trigger functional symptoms, such as cough, night sweating, flushing and palpitation. Here we report a case of small cell carcinoma combined with superior vena cava syndrome present with acute ST-elevation myocardial infarction.

Case report

A 53-year-old Taiwanese male smoker was sent to our emergency department due to progressively increasing chest pain and tightness, shortness of breath and productive cough for 2 days. On arrival, his body temperature was 37.6°C, respiratory rate 35 breaths/minute, pulse rate 165 beats/minute, regular blood pressure 118/61 mmHg, oxygen saturation in capillary blood (SpO₂) 97% with non-rebreathing mask, FiO₂ 1.0.

Laboratory data showed the following values: Leukocyte count was $10.09 \times 10^3/\mu\text{L}$ (neutrophils 83.4%, lymphocytes 15.1%), hemoglobin 9.6g/dL, troponin-I 12185pg/ml (subsequently tracking data present in Figure.1), thyrotropin <0.03 uIU/ml, free thyroxine 2.19ng/dl. Electrocardiogram (ECG) showed atrial fibrillation with rapid ventricular response and ST segment elevation in lateral chest leads (Lead V3, Lead V4, and Lead V5). Echocardiogram showed hypokinesia of apical septum, apex and anterior wall area with ejection fraction of left ventricle 50%. Chest radiography (Figure.2) showed widening of mediastinum with soft tissue mass lesion. Subsequent computed tomography of the chest (Figure.3) revealed large consolidations with air bronchograms in left upper lobe and mass lesion in mediastinum with encasement of the trachea, bilateral mainstem bronchi and main bronchi of both lobes. After endotracheal tube intubation and emergency treatment, the patient admitted to intensive care unit. He received endobronchial ultrasound-guided transbronchial needle aspiration and pathology diagnosis reported small cell carcinoma of lung. Contrast enhance computed tomography scan of abdomen was normal. Magnetic resonance imaging scan found several ring-enhancing tumors at bilateral cerebral hemisphere and right cerebellum. Hence the diagnosis was a small cell carcinoma of bilateral lobe of lung with brain metastases.

Radiotherapy and the first cycle chemotherapy regimen with intravenous cisplatin and etoposide were administrated. After that, chest radiography showed remarkable tumor shrinkage and the patient successfully weaning from mechanical ventilation. Thallium-201 myocardial perfusion imaging scan was

also arranged under relatively stable condition after few days of treatment and revealed none of significant perfusion defect in any segments of the left ventricle with essentially normal myocardial perfusion. Final, he was discharged and now receives regular chemotherapy and whole brain radiotherapy.

Discussion

Superior vena cava syndrome is the result of extrinsic compression of the superior vena cava by tumor. It obstructs the pathways for the return of venous blood to the right atrium and resulted in diminished cardiac output transiently. further, accumulating evidence supports the association between abnormal thyroid Function, both hyperthyroidism and hypothyroidism, at the time of an acute myocardial infarction and subsequent adverse cardiovascular outcomes. There is still not enough research between small cell carcinoma and other critical events, as well as the protocol for critical care, such as administrated chemotherapy on Respiratory distress patient. Further research might be needed.

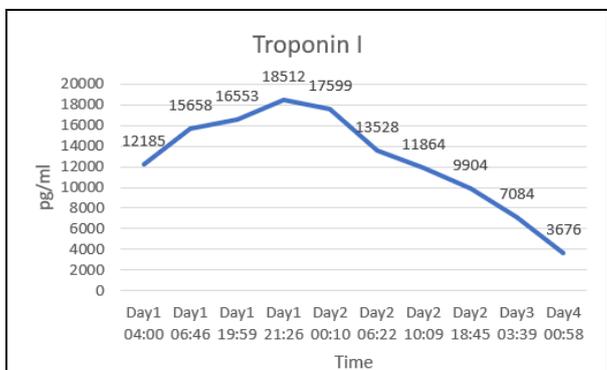


Figure.1



Figure.2



Figure.3