中文題目：**感染性心內膜炎併發顱內出血導致非阻塞性 ST 段上升心肌梗塞**

英文題目：**Infective endocarditis complicated with non-obstructive ST elevation myocardial infarction related to embolic intracranial hemorrhage**

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Introduction

Infective endocarditis (IE) complicated with ST elevation myocardial infarction (STEMI) is a rare condition, which may attribute to coronary embolism, obstruction of the coronary ostia by large vegetations, or coronary artery compression due to abscess formation. However, there have been no reported case discussing about IE complicated with non-obstructive STEMI. Herein, we reported a 38-year-old female, who presented with infective endocarditis complicated with non-obstructive ST elevation myocardial infarction related to embolic intracranial hemorrhage

Case Presentation

This 38-year-old female without any known systemic disease had intermittent fever for 1 months. She also presented with loss of appetite with weight loss of 10 kilograms within half year. There was no respiratory tract, urinary tract, or gastrointestinal complaint. No history of recent travel, sick contacts, animal contacts, insect bites, or IV drug abuse. On examination, there were no peripheral stigmata of infective endocarditis, although heart sound revealed an apical pansystolic murmur.

The initial workup revealed WBC of 9170 cells/uL with 87% segmented neutrophil, hemoglobin of 8.8 g/dL, and platelet count of 352 ,000/mm3. Beta thalassemia was also confirmed via Hb electrophoresis. Elevation of CRP (205mg/dL) and ESR (99/ml) were also noted. Other biochemistry data, including thyroid function, ANA, C3, C4, RA factor were within normal limit. Urine analysis and plain chest radiograph are both normal. A transthoracic echocardiogram identified a large vegetation (size 1.2 x 1.6 x 1.7 cm) on anterior mitral leaflet and submitral apparatus, and severe mitral regurgitation. Four of four sets blood culture all grew Streptococcus cristatus, and sensitive to all cephalosporin antibiotics. The diagnosis of infective endocarditis was made, and fever subside after antibiotic use.

Further surgical intervention for mitral valve replacement was consider, however, on day 21 of hospitalization, she had sudden onset of severe headache and loss of consciousness with desaturation. Intubation was performed. Brain CT showed

Intracranial hemorrhage at the right occipital lobe, subdural hemorrhage abutting right fronto-parieto-temporal lobe, along the cerebral falx and right tentorium, and subfalcine herniation to the left and brain edema.

The operation for ICH was arranged, but the EKG before operation showed ST elevation from V2-V5, and ST depression in lead II, III, aVF. Elevation of serum cardiac-specific markers was also found, which showed: CPK: 91 IU/L, CK-MB: 6.8 ng/mL, Troponin-I: 2.436 ng/mL. Due to suspect acute myocardial infarction, emergency coronary angiography was performed first, which revealed n normal coronary arteries without any evidence of stenosis. After that, craniotomy and subdural hematoma removal was performed. The EKG after operation turned to normal sinus rhythm without ST interval change, and cardiac enzyme was declined. After 3 weeks, brain MRI was performed, which compatible with previous CT finding and no obvious mycotic aneurysm was found.

Discussion

ECG Changes are common in patients with cerebrovascular diseases, particular in subarachnoid, but typical ST segment elevation in ICH or SDH is rare. The exact mechanism is still unclear, but it may be caused by releasing of catecholamines and stimulation of central autonomic certenrs (lateral and posterior hypthalamic areas) according to previous studies. Our case had ST elevation just after ICH with SDH, and totally recovery after craniotomy and subdural hematoma removal.

In our knowledge, this case should be the first case of IE complicated with non-obstructive ST elevation related to ICH, which reminds physicians that non-obstructive STEMI is still an extremely rare but possible complication of infective endocarditis and ICH should be carefully surveyed.