

中文題目：沙門氏菌引起之感染性心內膜炎:少見的致病菌

英文題目：Salmonella induced infective endocarditis: A rare causative organism

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Introduction:

Infective endocarditis is a severe infection to the heart valves, which could lead to life-threatening complications like valve regurgitation, embolism of brain, lung and limbs. We described the case of Salmonella induced endocarditis, which was the rare microorganism of the endocarditis.

Case presentation:

A 71-year-old man had a history of infective endocarditis complicated with severe mitral regurgitation, and received mitral valve replacement with Hancock II porcine valve in 2021/07. He had fever with frequent diarrhea for one week. While arriving at the emergency department, severe electrolytes imbalance and acute kidney injury were noted. Further blood culture revealed growth of group D Salmonella.

Definite ceftriaxone was prescribed with intravenous fluid supplement first, and his symptoms were relieved later. For consideration of vascular involvement, computed tomography angiography (CTA) of the aorta was performed and showed no evidence of aortic aneurysm. Transthoracic echocardiography (TTE) was also arranged without seeing vegetation. But further transesophageal echocardiography (TEE) showed 0.5 * 0.5cm oscillated mass over mitral valve, which was suspected vegetation. So the Salmonella endocarditis was impressed for the fulfillment of Duke's criteria (1 major with 3 minor).

After the ceftriaxone treatment, follow up blood culture showed no growth of bacteria. But due to allergic reaction with itchy skin and rashes, we shifted the ceftriaxone to ertapenem with ciprofloxacin. Follow up TEE was performed 3 weeks later, and showed no observation of residual vegetation. The complete course of antibiotics treatment lasted 4 weeks. He tolerated well without other discomfort and was discharged later.

Discussion:

The causative organisms of infective endocarditis are mainly Gram-positive cocci, like Staphylococcus, Streptococcus and Enterococcus. While the infection caused by Gram-negative bacilli is less, and mainly by the HACEK group (Haemophilus,

Actinobacillus, Cardiobacterium, Eikenella, Kingella) [1]. Salmonella induced endocarditis is uncommon, which is more relevant to gastrointestinal infection and vascular problems like mycotic aneurysm or aortitis, especially the C1 group [2].

But in a Taiwan study, Salmonella was the major isolate of Gram-negative bacilli instead of the HACEK group, accounting for 2.9% in 7240 cases [3]. In another review of Salmonella endocarditis [4], 35.6% of 87 cases would have preceding gastrointestinal symptoms. The rate of prosthetic valve involvement was around 26.3%, which was similar to the general condition [5]. And the mortality rate was 42.5%, which seemed higher than the other species induced infection.

Conclusion:

Salmonella induced endocarditis is rare. But in Taiwan, it seemed to be the major causative Gram-negative bacilli other than the HACEK group. Preceding gastrointestinal symptoms is common, and the associated mortality rate is high.

References:

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