

Figure: Multiple fractures (arrows) of the right 2nd to 9th ribs (A) and left 2nd to 8th ribs (B) on three-dimension computed tomography.

fractures showed various degrees of healing. Cough-induced multiple stress fractures of the ribs caused by untreated bronchial asthma was diagnosed. One-month treatment with fluticasone propionate (400 µg/day) resolved symptoms completely. Her menopause was normal and additional examination showed the normal bone density.

This case is very instructive because such multiple rib stress fractures are rare. Moreover, chest CT confirmed the predilected sites for rib stress fractures. Although fractures of the right 2nd and 3rd ribs are situated anteriorly, other fractures were seen on the posterior axillary line, which is the predilected site for cough-induced stress fracture as serratus anterior and the external oblique muscles attach at this region (1, 2).

Physicians need to consider the possibility of rib stress fracture when diagnosing unusual nodular lesions in the lung fields or cough-related chest pain. As mentioned previously, CT offers a useful tool for correct diagnosis (1, 2). Physicians should also be aware that reduced bone density will be a risk factor. However, cough-induced rib fractures can occur in the presence of normal bone density (2).

Keywords: Computed tomography, cough, rib, stress fracture

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Nightmare of a Breastfeeding Mother: Aortic Valve Endocarditis due to *Streptococcus salivarius* after Breast Engorgement

The Editor,

Sir,

A 25-year old postpartum woman was admitted to our hospital complaining of continuous remittent fever (max 38.7 °C) and musculoskeletal symptoms including arthralgias and myalgias. Past medical history included uncomplicated normal spontaneous vaginal birth six months ago. Additionally, just before admission to hospital, she had been diagnosed with breast engorgement and mastitis with no purulent discharge. She said that she kept breastfeeding while taking antibiotics (amoxicillin 2 g/day) for mastitis.

On admission, physical examination showed body temperature of 38.3 °C, blood pressure of 110/60 mmHg, pulse rate of 105 bpm, respiratory rate of 22/minute and oxygen saturation of 98.0% and 3/6 early diastolic murmur at mesocardiac focus with prominent S4. The extremities were normal. There were also no peripheral stigmata of infective endocarditis. Laboratory tests revealed haemoglobin level of 10.2 g/dL (normal range: 12–15.5 g/dL) and leukocyte count of 14 000/mm³ (normal range: 3900–11 700/mm³). Renal and liver function tests were within normal limits. In addition, erythrocyte sedimentation rate (ESR) was 42 mm/hour (normal range: 0–20 mm/h), C-reactive protein (CRP) was 87 mg/L (normal range: 0–8 mg/L) and urinalysis revealed microscopic haematuria.

In view of the detection of diastolic murmur and fever, repeated blood cultures were taken and transthoracic echocardiogram (TTE) revealed left ventricular (LV) ejection fraction of 45%, LV end-diastolic diameter of 60 mm, vegetation with 1.1 × 0.7 cm largest diameter on the bicuspid aortic valve and severe aortic insufficiency (Figure). Until the precise results of blood cultures were known, the patient

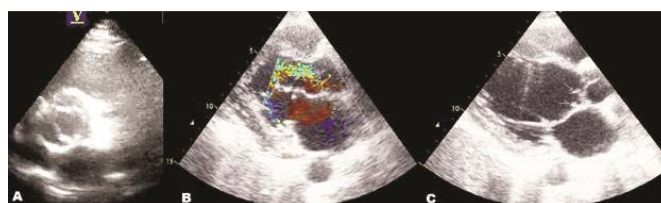


Figure: Transthoracic echocardiography on admission of the patient revealed bicuspid aortic valve (A) with severe aortic regurgitation (B) and vegetation (arrow) at left ventricular side of the aortic valve with maximum 11 mm diameter (C).

was diagnosed as infective endocarditis and empirical intravenous ampicillin (200 mg/kg/day) + gentamicin (3 mg/kg/day) were initiated. Although she improved clinically in a few days, sudden onset left upper flank pain developed during follow-up. Abdominal ultrasonography revealed hypoechoic regions at subcapsular regions of the spleen compatible with spleen infarct. Repeat TTE showed reduced vegetation size about 9 mm in diameter. Also *Streptococcus salivarius*, susceptible to ampicillin, was growing in all three blood cultures bottles. Therefore, the antibiotic therapy was restricted to only ampicillin 200 mg/kg/day. While both clinical and laboratory improvements were seen during the fourth week of antibiotic therapy, the vegetation, now 5 mm in diameter, and severe aortic regurgitation still persisted on repeat TTE. So the patient was referred for aortic valve surgery.

Infective endocarditis, an uncommon disease with high morbidity and mortality, is not a uniform disease, but presents in a variety of different forms, varying according to the initial clinical manifestation, the underlying cardiac disease, the microorganism involved, the presence or absence of complications, and underlying patient characteristics. For this reason, infective endocarditis requires a collaborative approach (1).

The most common organisms responsible for subacute bacterial endocarditis (SBE) are relatively avirulent/non-invasive pathogens, the Streptococci viridans (2). Streptococci viridans consisted of *S sanguis*, *S intermedius*, *S millitor*, *S sanguinis*, *S milleri*, *S salivarius*, *S mutans* and others. Streptococci viridans are normal inhabitants of the oral flora (3). In addition, Streptococci viridans may also be transiently present on the skin and may contaminate blood cultures. Because these organisms are relatively avirulent and non-invasive, virtually the only infectious disease that is associated with Streptococci viridans is SBE. The strains of Streptococci viridans causing SBE remain highly sensitive to penicillin and beta-lactam antibiotics (4). Monotherapy or combination therapy with a beta-lactam and aminoglycoside (eg gentamicin) is the most commonly used therapeutic approach (2). The infection is most probably due to transmission of *S salivarius* from the oral flora of the child in a breastfeeding woman during breast engorgement which resulted in bacteraemia and SBE on a previously unknown bicuspid aortic valve. Therefore, SBE should be kept in mind in a postpartum breastfeeding mother with breast engorgement in case of constitutional symptoms and cardiac murmur.

Keywords: Breast engorgement, breast feeding, lactating mothers, mastitis, *Streptococci viridans*

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Ampullary Pseudotumour: An Endoscopic Clue to Autoimmune Pancreatitis

The Editor,

Sir,

A 63-year old man with Type 2 diabetes mellitus for approximately 10 years presented with epigastralgia, anorexia and weight loss of 16 kg over four months. He had been diagnosed with pancreatitis four months previously, which became inactive after supportive management. His initial blood tests including liver and pancreatic biochemistries were grossly unremarkable. Panendoscopy for the upper gastrointestinal symptoms yielded a smooth-surfaced pseudotumour (black arrow) around the major duodenal papilla (white arrowhead) at the ampulla of Vater (Fig. 1). The subsequent abdominal computed tomography displayed a 1-cm nodular lesion in the ampullary area (black arrowhead), and a diffusely enlarged pancreas (white arrowheads) with an extreme protrusion in the pancreatic head [white arrows] (Figs. 2 and 3). Further diagnostic approaches revealed an elevated serum immunoglobulin (Ig) G4 level of 1470 (reference 3–201) mg/dL and a gamma globulin level of 38.1% (reference 9–18), along with an extensive lymphoplasmacytic infiltration in the specimens of endoscopic ampullary pseudotumour biopsy. The diagnosis of autoimmune pancreatitis (AIP) was established, and oral prednisolone was prescribed which was gradually tapered from a daily dose of 40 mg to 2.5 mg as a maintenance dose. The patient got dramatic clinical and radiographical improvement which lasted during the one-year follow-up period to date.

Autoimmune pancreatitis is an autoimmune-associated entity accounting for 5–6% of chronic pancreatitis (1). It