

Discussion

Staphylococci and streptococci are the main pathogens and Gram-negative bacilli are rare to cause infective endocarditis (2, 3). *E. meningosepticum* is a nonfermenting, nonmotile, Gram-negative aerobic rod and is not considered part of the normal human flora. It is a well-known pathogen causing meningitis in premature and newborn infants. Strains of this bacterium have infrequently been reported to cause infection among adults. In adults it can cause endocarditis, pneumonia, bacteremia, and keratitis (1, 4, 5). In the hospital environment, they exist in water systems and wet surfaces and serve as potential reservoirs of infection. Saline, lipid, and chlorhexidine gluconate solutions as well as contaminated sinks have been implicated as sources of infection (6). Contaminated surgically implanted devices, such as intravascular catheters and prosthetic valves, have also been reported to carry the bacteria (7).

The organism has a peculiar antibiotic profile and is usually resistant to most antibiotics commonly prescribed to treat Gram-negative bacteria (Aminoglycosides, beta-lactam agents, chloramphenicol, and carbapenems) but susceptible to agents used to treat Gram-positive bacteria (rifampicin, ciprofloxacin, vancomycin, and trimethoprim-sulfamethoxazole). Hence, selecting the appropriate antibiotic for the treatment is difficult. Some fluoroquinolones have shown favorable results (1, 8). Rifampicin is usually active *in vitro* and has been used as a part of combination therapy to clear persistent infections. Although vancomycin was used earlier to treat the patients, there are reports showing that vancomycin would not be effective against this organism (9). Thus, there is no optimal regimen for the treatment of *Elizabethkingia* spp. infections. More studies are required for the evaluation of these drugs. The doctor treated the patient with vancomycin and the patient responded well to vancomycin. His temperature turned normal and blood culture became negative. However, he died of *A. baumannii* bacteremia; this can be the limitation of the study for strongly proving vancomycin as good alternative to treat *E. meningosepticum* endocarditis.

Conclusion

E. meningosepticum could be a rare pathogen in endocarditis patients. Selecting the appropriate antibiotic is crucial for its treatment and vancomycin may be a good choice.

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New technique for challenging cases of percutaneous balloon mitral valvuloplasty: The venoarterial looping

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Introduction

Mitral stenosis (MS) is generally the sequel of rheumatic carditis occurring in childhood (1). MS is particularly observed in developing countries (1, 2). Untreated patients can develop irreversible right ventricular failure (1, 2). Since its introduction by Inoue, percutaneous mitral balloon valvuloplasty (PMBV) is considered the leading and effective treatment option for symptomatic moderate to severe MS with favorable valve morphology (3, 4). PMBV provides immediate and sustained hemodynamic improvement, comparable with the results of surgery (3). However, there are challenges in some cases of PMBV, where surgery is also not feasible. Various techniques have been described for directing the mitral balloon catheter to left ventricle during PMBV (5-9). Here we aim to define a new technique for challenging cases of PMBV in patients with a large left atrium and a severe MS called the venoarterial looping.

Case Report

A 67-year-old man was transferred to an intensive care unit from emergency service after intubation due to acute respiratory failure. The patient showed significant rheumatic MS (mitral valve area 0.6 cm²) and systolic heart failure (the left ventricular ejection fraction was 30%) associated with wide QRS complex (left bundle branch block; QRS duration >150 ms), and atrial fibrillation with rapid ventricular response

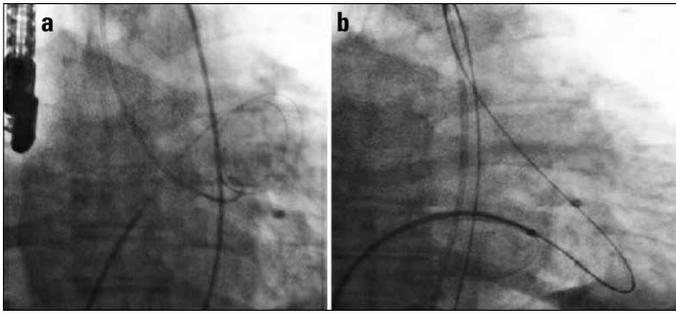


Figure 1. a, b. Fluoroscopic images demonstrating the challenging septostomy procedure (a) and venoarterial looping (b)

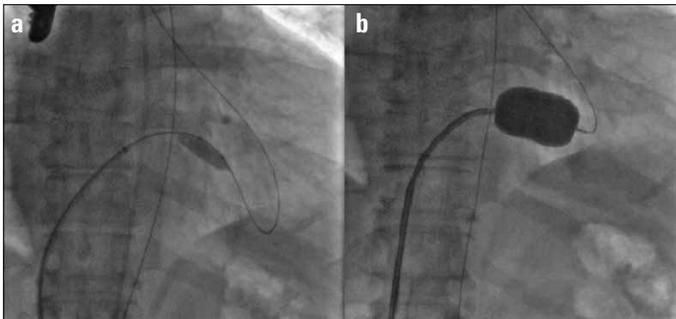


Figure 2. a, b. Fluoroscopic records show the predilatation of the mitral valve with a 10/40-mm peripheral balloon catheter (a) and final dilatation of the mitral valve with a Toray mitral balloon catheter (b)

on electrocardiography. After the recovery period, we decided to perform PMBV and cardiac resynchronization therapy-defibrillator (CRT-D) implantation combined with atrioventricular (AV) node ablation at the same session. Septostomy was performed despite the difficulties (e.g., shifting of interatrial septum) by assistance of transesophageal echocardiography (Fig. 1a). However, we could not direct the mitral balloon catheter to the mitral valve, even after attempting several maneuvers because of left atrium being very large and huge along with severe MS. We decided to attempt a new technique. A 0.35-in Terumo guidewire was directed to the aorta crossing mitral valve and left ventricle using a multipurpose catheter. Next, the guidewire was forwarded into the descending aorta, snared in left common iliac artery, and pulled out from the sheath. The venoarterial loop was formed for good support (Fig. 1b). A peripheral balloon catheter was advanced via right femoral vein over the guidewire. Predilatation of the mitral valve was performed by 10/40- and 12/40-mm peripheral balloon catheters (Fig. 2a). Finally, the Toray mitral balloon was advanced over the guidewire. The mitral valve was passed very easily and a 28-mm Toray mitral balloon was inflated (Fig. 2b). The mitral valve area was estimated to be 2.2 cm² at the end of the procedure. Mitral gradient decreased from 16 mm Hg to 5.5 mm Hg. Mild mitral but acceptable regurgitation was observed. Finally, CRT-D was implanted and AV node ablation was performed. The patient was discharged without complications.

Discussion

PMBV is recommended as a first-line therapy with high success and low complication rate in clinical and anatomical appropriate cases (3).

Although PMBV previously preferred only in young patients with mild to moderate stenosis, recently, PMBV are widely performed in older patients with severe MS. Therefore, various difficulties have emerged during the procedure of PMBV. Various loop and over-the-wire techniques have been defined to overcome these challenges (5-9).

Here we introduce a new modified over-the-wire technique. Unlike the other methods, a complete venoarterial loop was formed to provide better support. Then, we used the peripheral balloon catheter for predilatation of the stenotic valve. Finally, the Toray mitral balloon was advanced over a 0.35-inch guidewire and mitral valve was passed very easily.

Conclusion

The venoarterial looping is a unique technique and it may be useful in difficult PMBV cases.

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