Background: Cerebral microemboli detected by transcranial Doppler (TCD) occur systematically during cardiac angiography and surgery but their clinical significance are yet to be determined during percutaneous balloon mitral valvotomy for rheumatic mitral stenosis.

Methods: We attempted percutaneous transvenous mitral commissurotomy (PTMC) in seven (18–60 years) patients with severe rheumatic mitral stenosis (five were females). An Inoue balloon catheter was employed (sizes 24–28 mm) in all cases. There was decrease in mean end diastolic mitral gradient (from 20.2±3 mm Hg to 2.9±2 mm Hg) and increase in calculated mitral valve area from (0.7±0.6 to 1.9±0.2 cm²). One patient was in atrial fibrillation and no patient had severe mitral valve calcification. During and immediately after the procedure, all patients were monitored for cranial microemboli by a 2-MHz transcranial Doppler TCD probe, which was used to interrogate the right middle cerebral artery.

Results: Immediately after Inoue balloon inflation, single to multiple microemboli were detected in 5 patients. The interventions were uncomplicated and no patient developed cognitive alteration following the procedure.

Conclusion: The cranial microemboli observed during PTMC must have dislodged from the stenosed mitral leaflets during the process of commissurotomy by the Inoue balloon. The exact mechanism of PTMC is splitting of the fused mitral leaflet commissures by inflation of the Inoue balloon across the mitral valve. These microemboli must have been solid. Microemboli have, not uncommonly, also been observed during percutaneous transluminal coronary angioplasty. These are considered gaseous and do not result in any neurological sequelae. All seven patients were discharged the next day in stable condition and did not experience any neurological sequelae. Further studies are necessary to determine the ramifications of silent brain injury if any following percutaneous balloon valvotomy for mitral stenosis.


### Percutaneous Valve Intervention

#### Cerebral microemboli during percutaneous mitral valvotomy for rheumatic mitral stenosis

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Indraprastha Apollo Hospital, New Delhi, India

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**doi:** 10.1016/j.carrev.2009.04.039

### Assessment of paravalvular prosthetic mitral regurgitation with multimodality imaging: procedural, inhospital, and follow-up results

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**Background:** Paravalvular mitral regurgitation is a complication of mitral valve replacement surgery. These patients often develop haemolytic anaemia requiring transfusions. Treatment of these is usually with a repeat surgical procedure; however, percutaneous device closure may be offered in cases with high surgical risk.

**Methods:** We retrospectively reviewed our institutional data on percutaneous mitral paravalvular leak closures over the last 2 years. Procedural, inhospital, and follow-up results were analysed.

**Results:** A total of six percutaneous paravalvular leak closures were performed. The primary interventionalist was the same in all cases (DW). The