Ablation of perimitral flutter: acute and long-term success of the modified anterior line.

The modified anterior line (MAL) is an alternative to the mitral isthmus (MI) line for the treatment of perimitral atrial flutter (PMFL). We sought to investigate acute and long-term efficacy of this line if routinely used for PMFL. The cohort included 77 consecutive patients who underwent catheter ablation of PMFL. The anterior line was deployed between the anterolateral mitral annulus and the ostium of the left superior pulmonary vein. Perimitral atrial flutter was either the presenting arrhythmia after persistent atrial fibrillation (AF) ablation (Group 1, n = 42, 54.5%), occurring during AF ablation (Group 2, n = 25, 35%) or presenting as primary arrhythmia (Group 3, n = 8, 10%). Acute success was defined as PMFL termination during MAL deployment with demonstration of bidirectional line block. Acute success was achieved in 68 of 77 patients (88%) without difference between the three groups. In five patients an additional MI line was necessary to terminate PMFL and in four patients both lines failed to achieve termination. During follow-up (16 ± 7 months), 38 of 77 (49%) patients underwent a repeat procedure for a recurrent arrhythmia. During reablation, 13 of 38 (34%) patients were identified to have a PMFL recurrence. Persistent MAL block was demonstrated in 22 of 38 (58%) patients during the repeat procedure.
ablation. The MAL is effective for acute and long-term treatment of PMFL. Maintenance of bidirectional MAL block was shown in 58% of patients during a repeat ablation.