Objective To observe the curative effect of endovascular therapy including percutaneous transluminal angioplasty (PTA) and PTA plus stenting on Takayasu arteritis (TA).

Methods Forty-eight inpatients with TA (17 males and 31 females) at the age of 19–53 years (mean 27.6±18.1 years), who underwent endovascular therapy (PTA only or PTA plus stenting) in Department of Cardiology, Southwest Hospital, Third Military Medical University (Chongqing, China) from January 2002 to May 2009, were enrolled in this study. Treatment outcome and data including erythrocyte sedimentation rate, C-reactive protein, CTA, MRA, Doppler vascular ultrasound findings obtained during a follow-up period of 42.8 months were analysed.

Results A total of 180 lesions were detected in the 48 patients by angiography. Of the 101 lesions that underwent endovascular therapy, 29 were found in subclavian artery and arteria innominata, 28 in carotid, 34 in renal artery, two pulmonary, and eight coronary artery, respectively. Good revascularisation was achieved in all these lesions. No residual stenosis occurred in 76 lesions (75.2%) with only minimal residual stenosis observed in 25 patients (24.8%). Restenosis was observed in three lesions (12.0%) after treatment with PTA only and in five lesions (6.5%) after treatment with PTA plus stenting during the follow-up period of 3–6 months. No significant complication occurred in all recurrent stenoses after endovascular therapy.

Conclusions Endovascular therapy including simple PTA or PTA plus stenting is a safe and effective treatment modality for chronic inactive TA.