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APPLICATION OF INTRAVASCULAR ULTRASOUND IN DIAGNOSIS AND THERAPY OF PERIPHERAL ARTERY STENOSIS

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Objectives To evaluate the merits of intravascular ultrasound (IVUS) in the diagnosis and vascular Interventions for peripheral artery stenosis.

Methods 94 in patients of department of cardiology of Southwest hospital from October 2006 to September 2010 were collected, who were diagnosed with Peripheral artery stenosis, there were 58 males and 36 females in them, ages were form 26 to 77 (58.4 ±18.3) years. The patients were divide to DSA (Digital Subtraction Angiography, DSA) group (43 patients) and DSA+IVUS group (51 patients), DSA was used in DSA group, DSA and IVUS were both used in DSA+IVUS group, and The outcome of two techniques were compared. Stenting was implemented under the guidance by DSA and IVUS respectively, and the effect of stenting was observed. Ultrasonic examination and CTA were used in follow up after stenting, DSA and IVUS were used when necessary.

Results In DSA+IVUS group, 77 vascular stenosises were found by DSA, there were 42 eccentric stenosises and 22 concentric

stenosises in them; 82 vascular stenosises were found by IVUS, there were 63 eccentric plaques and 19 concentric plaques in them. The diameter stenosis rate measured by IVUS (67.1±12.2)% was significant higher than that measured by DSA (54.5±11.4)%, ($p<0.05$). The area stenosis rate measured by IVUS (89.3±12.3)% was significant higher than that measured by DSA (77.1±13.1)%, ($p<0.05$). 82 vascular lesions in DSA+IVUS group were treated by stenting, 53 vascular lesions in DSA group were treated by stenting, all of them were successful accomplished. After 3–48 months' follow-up, the restenosis rate of DSA group 15.1% (8/53) was significant higher than the restenosis rate of DSA+IVUS group3.7% (3/82) ($p<0.05$).

Conclusions Compared with DSA, IVUS can accurately identify the lesion characteristics and the severity of stenosis, it's more effectually to guide and evaluate stenting.