

AB063. Gore PROPATEN Vascular Graft vs. great saphenous vein graft for aorto-renal artery bypass in pediatric/adolescent patients of Takayasu arteritis

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Background: For patients of Takayasu arteritis with severe renal artery stenosis, the graft restenosis rate after interventional therapy is 77.3%, thus aorto-renal artery bypass would be the main treatment for this type of patients and can decrease the restenosis rate.

Methods: From Mar 1993 to Dec 2017, 31 cases of pediatric/adolescent Takayasu arteritis patients with severe renal artery stenosis were admitted to our center. All patients were diagnosed by the American College of Rheumatology 1990 criteria for the classification of Takayasu arteritis. All patients underwent aorto-renal artery bypass. The location and degree of renal artery stenosis were evaluated by preoperative total aortic enhanced computed tomography (CT) scan, and the potential position of renal artery trunk or renal artery branches for graft anastomosis was also selected by analysis of CT. Saphenous vein graft (SVG) or Gore PROPATEN Vascular Graft was used for the bypass. The procedure of surgery was as follows: using median incision or lumbar incision to expose the abdominal aorta and renal artery trunk and its branches; using 8-cm SVG or Gore PROPATEN Vascular Graft as the graft for bypass; the distal was anastomosed to abdominal aorta end-to-side, the proximal was

anastomosed to renal artery trunk or branch side-to-side. All patients were treated with glucocorticoid for 3 months postoperatively, and were regularly followed up by vascular ultrasonography and aortic enhanced CT scan.

Results: In this study there were 24 female and 7 male patients. The patients' age was 8–18 years. The follow-up time was 3–300 months. The average blood pressure was $(175\pm26)/(100\pm19)$ mmHg before operation, and decreased to $(139\pm15)/(85\pm13)$ mmHg after operation. SVG graft was used in 26 patients and Gore PROPATEN Vascular Graft in five patients. In SVG graft group, the graft restenosis occurred in seven patients in 1 year after surgery, and aneurysmal degeneration occurred in three patients (incidence of 10%) in 5–7 years postoperatively and was treated with endovascular exclusion; while in Gore PROPATEN Vascular Graft group there was such complications.

Conclusions: Aorto-renal artery bypass is an effective treatment for Takayasu arteritis patients with severe stenosis of renal artery trunk, but using SVG graft for the bypass has a high risk of late aneurysmal degeneration of the graft. In pediatric/adolescent patients of Takayasu arteritis, the requirement for the future growth and the long-term control of disease should be considered, thus these patients could benefit more from the use of Gore PROPATEN Vascular Graft in aorto-renal artery bypass, by reducing the incidence of aneurysmal degeneration while guaranteeing the patency of the bypass graft.

Keywords: PROPATEN; Takayasu

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