Abstracts

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Differential Effect of Low-Dose Aspirin for Primary Prevention of Atherosclerotic Events in Diabetes Management: A Subanalysis of the JPAD Trial

Conclusion: Low-dose aspirin reduces atherosclerotic events predomi-
nantly in patients with diabetes treated with diet alone and not in patients
treated with oral hyperglycemic agents or with insulin.

Summary: There have been two large trials investigating low-dose
aspirin and its ability to reduce cardiovascular events in patients with
diabetes but without known vascular disease. Both were unable to demon-
strate benefit, but both trials had potential flaws. The Prevention of Progres-
sion of Arterial Disease and Diabetes (POPADAD) trial failed to document
a benefit of aspirin in Scottish patients with either type 1 or type 2 diabetes.
However, there were fewer cardiovascular events than anticipated and low
compliance with aspirin (Belch J. BMJ 2008;337:a1840). The second trial,
Japanese Primary Prevention of Atherosclerosis with Aspirin for Diabetes
(JPAD) trial did demonstrate a 20% reduction in atherosclerotic events with
aspirin but did not reach statistical significance (Ogawa H. JAMA 2008;300:
2154-41). There have also been epidemiologic studies suggesting patients
with diabetes treated with insulin have increased mortality compared to
those receiving other hypoglycemic agents (OHAs) or managed with diet (1)
diabetes treated with insulin may be the most likely to benefit from low-dose
aspirin therapy. The authors therefore performed a subanalysis of the JPAD
trial. Their working hypothesis was low-dose aspirin would be beneficial for
primary prevention in patients with diabetes receiving insulin. JPAD was a
randomized, controlled, open label trial. In the trial, 2359 patients with
Type 2 diabetes and no previous cardiovascular disease were randomly assigned to
low-dose aspirin (81 or 100 mg daily) or to no aspirin. Median follow-up was
4.4 years. This paper analyzes the differential effects of low-dose aspirin in
preventing atherosclerotic events in patients receiving different methods of
diabetic management. At baseline there 326 patients treated with insulin,
1750 treated with OHAs and 463 managed with diet alone. Patients treated
with insulin had the worst glycemic control and the longest history of
diabetes and the highest prevalence of diabetic microangiopathy. Patients
treated with diet alone had the opposite characteristics. Atherosclerotic
events occurred at an incidence of 26.0, 14.6 and 10.4 cases per 1000 person
years respectively in the insulin, OHAs, and diet alone groups. In patients
treated with insulin or OHAs, low-dose aspirin did not affect atherosclerotic
insulin HR 1.19; 95%CI, 0.6-2.4; and OHA HR, 0.84; 95% CI,
0.57-1.24). In the diet-alone group, however, low-dose aspirin did not
prevent atherosclerotic events despite the lowest event rate (HR, 0.21; 95%
CI 0.05-0.64).

Comment: The fact aspirin was not effective in preventing athero-
sclerotic events in patients with diabetes treated with insulin or OHAs is
compatible with recent literature. However, the finding that aspirin was
effective in reducing vascular events in patients treated with diet alone is a
new and a bit surprising. Perhaps in patients with advanced diabetes the
burden of atherosclerosis is such new events are unpreventable by aspirin, or
such patients have some degree of aspirin resistance. The decision to use
aspirin to prevent vascular events in patients with diabetes should consider
not only conventional cardiovascular risk factors, but the stage of the
disease as well.


Longevity and Outcomes of Axillary Valve Transplantation for Severe Lower Extremity Chronic Venous Insufficiency

Conclusion: Venous valve transplantation has good initial technical
and symptomatic success but poor long term valve competency and symp-
tom control.

Summary: Venous valve reconstruction using venous valve transplan-
tation with a segment of axillary vein can be used to treat a small subset of
patients with chronic venous insufficiency (CVI) who fail conservative
therapy or more standard techniques of superficial venous surgery. In this
study the authors report their experience with upper extremity to lower
extremity venous valve transplantation for treatment of refractory CVI.
There were 139 complex venous valve reconstructions performed between
1991 and 2007 for CVI, 18 underwent upper extremity to lower extremity
venous valve transplantation. In 13 cases an upper extremity valve was
transplanted to the popliteal vein, to the common femoral vein in 6 cases
and to the saphenofemoral junction in two cases for a total of 21 procedures. All
patients had follow-up with duplex scanning to assess valve competency and
received clinical follow-up as well. Mean follow-up was 37 months and 57%
of the patients were men with a mean age of 44 years. Clinically, 57% of the
limbs were CEAP 5-6. The mean postoperative venous disability score was
2.95. 66% of the patients had postthrombotic valvular dysfunction and no
proximal venous obstruction was documented in any patient at the time of
valve transplantation. Technical success of the operation was defined as a
competent valve at the end of the procedure and was achieved in 20 of 21
cases. Post operative complications, primarily bleeding, occurred in one-
third of patients. The mean postoperative venous disability score was 2.65
and this increased to 2.75 (P<0.05 compared with baseline) at the last
postoperative visit. Median time to return of symptoms was 12 months and
median reflux free survival was 15 months.

Comment: Axillary valve transplantation is an example of a theoreti-
cally sound but poorly performing procedure to treat deep venous insuffi-
ciency in patients with CVI. The operation is not easy. Some axillary valves
are incompetent. In six of the author’s patients the valves needed to be
repaired at the primary operation to achieve competency. Nearly 75% of the
patients in this series were postthrombotic patients, arguably the most
difficult subset of patients with refractory CVI. Whereas it appears axillary
valve transplantation does not work well for postthrombotic CVI, there may
be some subsets of patients, i.e those with primary deep venous insufficiency,
who may still potentially benefit from the procedure.


Major Arterial Aneurysms and Pseudoaneurysms in Behçet’s Disease: Results from a Single Centre

Conclusion: One-third of patients with Behçet’s disease (BD) and
with BD-related aneurysms will, upon further investigation, be found to
have additional aneurysms.

Summary: BD is an autoinflammatory, multisystem, vasculitis that
affects all sizes and types of vessels (Cocco G, et al. Open Cardiovasc Med J
2010;4:63-70). BD, however, mostly affects veins, venules and capillaries
ment is infrequent and occurs in only about 1 to 7% of BD patients. Arterial
pathology is both arterial occlusions and aneurysm rupture, and it is the
arterial involvement that correlates closely with mortality and morbidity in
BD patients. This report focuses on 30 BD patients from Korea diagnosed
with arterial aneurysms and pseudoaneurysms of major arteries. The focus was on
initial clinical symptoms, location of aneurysm lesions, and treatment re-
sponses. The data were derived from medical records retrospectively. There
were 10 arterial aneurysms and pseudoaneurysms in the 30 patients (32 saccular
aneurysms, eight fusiform aneurysms, and seven pseudoaneurysms. Most
pseudoaneurysms and aneurysms (27 patients, 90%) had not ruptured. Most
patients presented with symptoms (70 %, n = 21). One-third of patients had
two or more aneurysms lesions. Aneurysm recurrence was observed in five
patients after treatment with a stent graft (n = 3) graft interposition (n = 1)
or embolization (n = 1).

Comment: Large artery arteritis is an infrequent, but a major cause of
mortality in BD patients. The article confirms the clinical impression of an
apparent high rate of graft related complications with treatment of BD
aneurysms; perhaps related to ongoing inflammation in the BD patient. Of
most interest is the fact that if you find an aneurysm in a patient with BD, if
you look further, one-third of the time you will find an additional aneurysm.
Therefore patients with BD and a discovered aneurysm essentially require
visualization of their entire arterial system. BD arterial aneurysms can be
found in virtually any artery from the aortic arch to the pulmonary circula-
tion, as well as in intracranial arteries and the tubial arteries.


Emboli Study

Conclusion: Transcranial Doppler (TCD) recordings comprising 2
baseline sessions lasting one hour provide the best prediction of stroke risk
in patients with asymptomatic carotid stenosis.

Summary: Randomized clinical trials have demonstrated that stroke
risk can be reduced with prophylactic carotid endarterectomy (CEA). How-