


DISCUSSION

Dr Jamal Hoballah (Iowa City, Iowa). I have some questions regarding the completion imaging. A few years ago, we looked at factors that may affect the development of stenosis at the distal anastomoses, and we found the presence of any technical imperfections at the anastomotic site is a big predictor for development of stenosis.

Your study seems to indicate that completion imaging may not be essential. Do you think the lack of importance of the completion imaging in your study is a reflection of the technical expertise of the surgeons who performed these procedures? With the current fellows graduating with barely 25 to 50 vein grafts, can graduating fellows skip completion angiograms?

Dr Andres Schanzer. In reference to your first question with regards to the distal anastomosis and technical aspects at that site, unfortunately with this data set, we only know if a completion study was performed but do not have specific information on the individual findings based on that angiogram or duplex.

In reference to your second question on the expertise of performers, I think that this was the most broad representation of infringuinal bypass collected to date, including 83 community and academic sites, so I think it is a fair representation of real world practice.

As far as completion imaging, these data do not support it, although I can tell you that duplex is easy to do and we do it regularly on our vein bypasses.

Dr Kevin Burnand (London, United Kingdom). Thank you very much for this nice study which confirms all previous studies from centers. Can you tell me, a few technical things? Can you tell me how your vein size and diameter was actually measured? And I am assuming that you took the minimum diameter as the one that you looked at. You have not told us anything about the outflow from the leg and was that important in terms of patency.

And finally, the $64,000 question is, if you have a patient with a less than 3.5 or less than 3 mm diameter vein, do you actually put a PTFE bypass in, or do something different? You still seem to put in the small veins as bypasses.

Dr Schanzer. In reference to your first question on how we measured size and diameter, it was actually left to the discretion of the surgeon with some specific requirements. For diameter, the measurement was made at the smallest point on distention of the vein. But as far as actually measuring it, whether using a ruler or a caliper, it was left to the discretion of the surgeon, and the same applies for length.

As far as the outflow, unfortunately, we do not actually have outflow scores on these patients, so I am unable to comment on that, although it certainly is an important point.

Your final question was about whether prosthetic is a better option in the setting of a less than 3 mm diameter vein graft; we did not compare vein with prosthetic in this study because no prosthetic bypasses were included in this cohort. I can tell you my personal bias after studying these patients is that I think the results, while worse than a greater than 3.5 mm diameter vein, are actually still quite good and, I think, compare very favorably to all of the prosthetic reviews that are available in the literature currently. So, I do not think that a prosthetic is necessarily the ideal choice in that situation.

Dr John Connolly (Orange, Calif.). Do you think it is important to control the pressure when expanding the vein to locate branches for ligation? Otherwise one can traumatize the vein lining. It has always been my opinion that one should control it and I have believed that the relatively poorer long-term patency of vein versus internal mammary artery when used for coronary bypass could be explained by the trauma of very high pressures when one is expanding the vein.

Dr Schanzer. With regards to controlling the pressure, we do believe it is important. However, in this data set there was no protocol-specific methodology for how the surgeons distended the veins. All veins were distended for measurements. It is possible that some high pressure distention was performed. We do try to maintain low pressures on distention and feel that your point is an important one.