

or to determine the association between a genetic risk factor and the severity of POCD [4].

We concur completely that the use of continuous measures provides greater statistical power and allows more sophisticated analyses than the use of binary outcome measures in studies designed to determine the nature and the severity of POCD. In fact, we [4] recently demonstrated that application of a binary clinical criterion for "cognitive impairment" in older people on a single occasion resulted in a 50% false-positive classification rate. This false-positive rate was reduced dramatically when the same criterion was applied serially and only those individuals who consistently met the criterion were rated as impaired. Further, when serial data collected in individuals were considered on a continuous scale rather than as a binary outcome (below or above the cutoff score), greater sensitivity to subsequent cognitive impairment was observed.

Like Whitaker, we believe the use of continuous data is crucial to understanding the nature and the severity of POCD in patients who have undergone coronary artery surgical procedures. We also believe that observational studies designed to estimate the incidence of POCD using binary classification criteria are likely to contain high rates of false-positive classifications.

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References

1. Collie A, Darby DG, Falletti MG, Silbert BS, Maruff P. Determining the extent of cognitive change after coronary surgery: a review of statistical procedures. *Ann Thorac Surg* 2002;73:2005-11.
2. Arrowsmith JE, Harrison MJG, Newman SP, Stygall J, Timberlake N, Pugsley WB. Neuroprotection of the brain during cardiopulmonary bypass: a randomized trial of remacemide during coronary artery bypass in 171 patients. *Stroke* 1998;29:2357-62.
3. Steed L, Kong R, Stygall J, et al. The role of apolipoprotein E in cognitive decline after cardiac operation. *Ann Thorac Surg* 2001;71:823-6.
4. Collie A, Maruff P, Currie J. Behavioral characterization of mild cognitive impairment. *J Clin Exp Neuropsychol* (in press).

25-Year Follow-Up of Homograft Aortic Conduits for Coarctation Repair

To the Editor:

I read with interest the article by Hüttl and associates [1] concerning 40-year follow-up of 4 patients who underwent homograft aortic segment replacement of the aortic isthmus for management of long segment coarctation.

Doctor Robert E. Gross at the Boston Children's Hospital was the first to perform this procedure in humans in 1948. He reported on the first 19 patients in 1951 [2] and between the years 1948 and 1964 carried out this operation in 88 patients. Doctor Gross and I carried out follow-up studies on this patient group in 1968 and again in 1973 [3]. Of the 88 patients, 12 had homografts preserved in nutrient medium as reported by Hüttl. The remaining 76 received grafts that were sterilized by irradiation and then preserved by freeze drying. Of the total group, there were 6 initial hospital deaths. Follow-up in 1968 was on 45 patients up to 20 years postoperatively and repeat follow-up in 1973 was on 40 patients up to 25 years postoperatively. During this 25-year period there were 9 known late deaths, only 2 of which were related to the original aortic homograft or coarctation. One patient died 6-1/2 months postoperatively of a ruptured mycotic aneurysm of the superior mesenteric artery thought secondary to infection of the homograft. A second patient died 19 years postoperatively with severe recurrent coarctation.

As the authors of the current article state, late follow-up information on homograft aortic material is of great interest today as it is used frequently in the repair of congenital cardiac anomalies as well as for vascular reconstruction in the presence of infection.

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References

1. Hüttl J, Balazs G, Entz L, Hüttl K, Bodor E, Szabolcs Z. Aortic coarctation reconstructed by resection and homograft replacement in the 1950s: long-term outcome 40 years after operation. *Ann Thorac Surg* 2002;73:1678-80.
2. Gross RE. Treatment of certain aortic coarctations by homologous grafts. *Ann Surg* 1951;134:753-68.
3. Litwin SB, Gross RE. Long term follow-up of human frozen aortic allografts. *Cryobiology* 1968;4:259.

Reply

To the Editor:

We are thankful to Dr Litwin for sharing the long-term results of pioneering work. Even by today's standards the surgical results of Dr Gross' team are outstanding. The management and operative techniques that we perform in our institution are based on his published article [1]. The tissue after homograft preparation becomes nonviable; however, this is probably not significant for aortic wall replacement. There is no evidence that maintaining cell viability during preparation and storage improves long-term results of allograft valves [2]. The other similarity between Gross' team and our group is the operating strategy. Nowadays