Are allografts the ‘choice’ in infectious endocarditis with periannular abscess?

See page 490 for the article to which this Editorial refers

The choice of valve substitutes to replace destroyed heart valves has been — and probably will remain — a controversial issue. The subject has been recently addressed in the Guidelines compiled by The American College of Cardiology and The American Heart Association. While this lengthy and otherwise comprehensive document does discuss the choices of valve substitutes in general, it skirts the issue of valve substitutes in cases of active endocarditis with periannular abscess formation.

The report of Knosalla and associates, published in this issue is undoubtedly intended to fill this gap. By demonstrating the superior resistance to infection of aortic root allografts, their work questions the appropriateness of using prosthetic valves in septic aortic valve endocarditis in general and in cases when the process is associated with periannual abscess formation.

The article is a powerful argument indeed, but because of some of its inherent shortcomings, may not be the ‘final word’ in the debate.

First of all, while the randomization of the patients may be clinically acceptable (I can’t see how, ethically a surgeon could have acted otherwise once they had become convinced of the superiority of allografts) scientifically as well as statistically it is difficult to accept the fact that the control group was assembled of ‘left-over’ patients, for whom (for reasons not fully explained) allografts were not available.

Another problem with the control group is that previous studies did indeed reveal differences in clinical outcome of patients with septic endocarditis, depending on selection among various biological and mechanical prosthetic valve substitutes. Grouping these varieties together certainly does not constitute an ideal randomization, nor does the fact that the clinical material itself is too small to equalize diversities. The microbiological background is mixed, the antibiotic treatment is undefined, the surgical technique not uniform, etc. A multivariate analysis of the above factors probably would cast an additional shadow on the study’s statistical validity.

It would also have been useful if the authors had included in their paper a brief retrospective review of the vast experience of their institution in managing endocarditis with and without periannular abscesses. What was their mortality with prosthetic valves before the present study period? Concerning the limited number of patients in their control group, this would have provided a very useful background. Also, it would have been interesting to the reader to know their present choices of valve substitutes as well as the clinical results obtained in patients with active septic endocarditis but no periannular abscesses.

The survival rate of the patients with allografts (and to some degree also in the prosthetic group) is impressive and an actuarial survival rate of 82·1% which exceeds results reported from most other institutions using allografts to replace the infected aortic root, is certainly commendable. Thus the paper certainly proves the clinical excellence of the surgeons of the Deutsches Herzzentrum. However, it comes short of the ‘convincing demonstration’ of the superiority of allografts promised by the authors.

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