

EDİTÖRE MEKTUP LETTER TO THE EDITOR

The Use of Endomyocardial Biopsy in Paediatric Heart Transplant Patients: An Institutional Approach

Dear Editor,

We would like to congratulate Belgi et al on their recent paper (1). Great Ormond Street Hospital for Children NHS Trust is the largest paediatric cardiac transplantation center in the United Kingdom (UK). In our practice total number of transplants is 268 patients and we perform almost the two thirds of the total annual paediatric transplants in the UK (24 patients of 34 total UK Paediatric Transplants in 2003). Transplant service was established in 1988 and since that time our policy on biopsy has varied. In the first few years frequent (weekly) biopsy in the early weeks post transplant was the norm, becoming monthly and then annually thereafter. Later on we abandoned biopsy for non-invasive assessment. After some debate we have established a middle ground with endomyocardial biopsies being used, but much less frequently than before. Biopsies are performed 3 times in the first 6 months: before discharge, and then the others are timed to coincide with steroid reduction and withdrawal. More biopsies are performed if there was a high-grade rejection. Annual biopsies are not performed because of the low yield of positive results apart from the ABO mismatches when we check for complement and immunoglobulin deposition. The biopsies appear to be low risk; we have had no significant complications and fatalities from biopsy, although 7 years ago there was 1 pericardial effusion from a probable perforation, that did not need surgical exploration. We have not had problems with tricuspid regurgitation. Most cases are performed under general anaesthesia. We usually use the neck approach, but use the femoral vein with a long sheath technique if extracorporeal membrane oxygenation (ECMO) was used in some small infants. Usually bi-plane screening is preferred to ensure catheter position is safe. The transplant cardiologists and interventional cardiologists share the work of biopsies and trainees will often perform the procedures under careful supervision.

We have a different approach to the use of endomyocardial biopsy in children. Although we do a relatively limited number of biopsies compared to adult centers, we have found them helpful in patient care. For example, asymptomatic episodes of grade III rejection have been detected without any echocardiographic or electrocardiographic abnormality that appears to justify our bi-

opsy policy. We feel we can detect those cases that are more prone to rejection and modify their treatment at an earlier stage; the policy also allows us to wean steroids safely, without the frequent biopsies of earlier years.

As a policy, we will undertake biopsies in children of all ages, including infants. ABO mismatch transplants are performed in infancy in our institution and this group has the biopsy sample checked for complement and immunoglobulin deposition. Our usual schedule is to perform 3 biopsies in the first 6 months and further biopsies if rejection of grade II or above had been documented. This allows us safely to wean steroids. ABO mismatches continue to have biopsies at their annual review. While this letter is not a criticism of the paper by Belgi et al, which mentions that endomyocardial biopsy is not suitable in the neonatal and infancy period, we hope it does illustrate, that different approaches for monitoring of rejection are in use in other paediatric centers. With increased use of mismatch transplants it is likely that biopsies will continue to be important in paediatric transplantation, even in small infants.

Ergin Koçyıldırım MD,
Michael Burch MD,
Martin J. Elliott MD
Great Ormond Street Hospital for
Children NHS Trust,
Cardiac Unit, London, United Kingdom

References

1. Belgi A, Basarici I. Noninvasive methods for the diagnosis of rejection after heart transplantation. *Anadolu Kardiyol Derg* 2003; 3: 245-51.

Author's Reply

Dear Professor Timuralp,

I would like to thank the author very much for his kind opinion on our review. I think that the experience of author supports an important information on paediatric cardiac transplantation monitoring to the article.

Aytül Belgi, MD, Assistant Professor
Akdeniz University
Department of Cardiology