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Association of viral genomic DNA with heart graft loss

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The risks that limit survival after heart transplantation include allograft rejection and coronary vasculopathy. In the May 17 [New England Journal of Medicine](#), Girish Shirali and colleagues report that identification of viral DNA in the myocardium of paediatric transplant recipients is predictive of adverse clinical events, including coronary vasculopathy (*N Engl J Med* 2001, **344**:1498-1503).

Serial PCR analysis was performed prospectively on all myocardial biopsy samples obtained from children who were cardiac-transplant recipients at [Loma Linda University Children's Hospital](#). In 29 of the 34 patients with positive results on PCR (85%), whose samples included, DNA from adenovirus, enterovirus, parvovirus, cytomegalovirus, herpes simplex virus or Epstein-Barr virus, an adverse cardiac event occurred within three months after the positive biopsy, and 9 of the 34 patients had graft loss due to coronary vasculopathy, chronic graft failure or acute rejection. The detection of adenovirus was associated with considerably reduced graft survival ($p=0.002$).

The authors speculate that a persistent subclinical inflammatory response is responsible for the association, but the exact mechanism remains as yet unknown.

References

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2. Loma Linda University Children's Hospital, [<http://www.llu.edu/lluch/>]