

## Reply to the correspondence letter by M. Unolt “Congenital heart disease, genetic syndromes and major non-cardiac malformations”

Christopher Wren · John J. O’Sullivan · Asif Hasan

Received: 6 September 2012 / Accepted: 6 September 2012 / Published online: 18 October 2012  
© Springer-Verlag 2012

We appreciate the interest shown in our paper by Dr. Unolt and colleagues and agree with their comments about the influence of non-cardiac malformations and genetic abnormalities on the outcome of cardiac surgery. In our paper, we chose to look at the whole population of infants with cardiovascular malformations—including those not undergoing cardiac surgery—to look at mortality from all causes. We looked at data for 20 years from 1987–2006, and obviously, clinical management changed during that time and has continued to do so since. The very large majority of infants with significant cardiovascular malformations now undergo surgery, and the operative risk for most of them is now very low [2]. This means that the adverse effect on outcome for those with serious non-cardiac malformations is likely to have become more marked. Conversely, results have improved greatly for those with common chromosomal abnormalities, and there is

now no evidence that trisomy 21 [1] or 22q11 deletion [3] has any influence on the risk of cardiac surgery.

### References

1. Irving CA, Chaudhari MP (2012) Cardiovascular abnormalities in Down’s syndrome: spectrum, management and survival over 22 years. *Arch Dis Child* 97:326–330
2. Knowles RL, Bull C, Wren C, Dezateux C (2012) Mortality with congenital heart defects in England and Wales, 1959–2009: exploring technological change through period and birth cohort analysis. *Arch Dis Child*. doi:10.1136/archdischild-2012-301662
3. Michielon G, Marino B, Oricchio G et al (2009) Impact of DEL 22q11, trisomy 21, and other genetic syndromes on surgical outcome of conotruncal heart defects. *J Thorac Cardiovasc Surg* 138:565–570

---

C. Wren (✉) · J. J. O’Sullivan · A. Hasan  
Freeman Hospital,  
Newcastle upon Tyne, UK  
e-mail: christopher.wren@nuth.nhs.uk