Fast-tracking in Paediatric Cardiac Surgery: A Retrospective Audit.

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Introduction:
Despite the evolving complexity of congenital heart disease cases requiring surgical intervention, improvements in antenatal screening, prompt neonatal diagnosis and advances in surgical techniques have seen survival rates rising. Traditionally post-operatively these patients spent prolonged periods intubated and ventilated in intensive care. More recently there has been a move towards an evolving practice known as ‘fast-tracking’ where patients are extubated and moved to HDU within a few hours of surgery.

Potential benefits of this approach include reduced length of ITU and total hospital stay, reduced incidence of complications associated with prolonged ventilation, reduced impact of hospitalisation on the child and family, improved resource allocation and reduced expenditure.

Methods:
A retrospective audit of 157 cardiac surgical patients over a sixth month period at a single large tertiary referral centre in the North West of England was conducted by a single researcher. Cases requiring cardiopulmonary bypass and those not requiring bypass were included. A wide range of procedures were performed including TOF repair, PDA ligation, ASD and VSD closures, arterial switch procedures, PA banding and pacemaker insertions. Ages of cases ranged from 2 days to 19 years of age.

Results and Conclusions:
Results revealed 33% of patients were extubated within eight-hours post-op despite no current protocol being in place for fast-tracking. The incidence of post op complications was 32.7% amongst the fast tracked group, compared to 54.3% of conventionally managed patients. No significant differences in rates of re-intubation were observed between the two groups. Length of ITU and total hospital stay were reduced within the fast-tracked cases.

Fast-tracking has the potential to improve service planning and encourage more cost-effective use of resources in addition to the benefits for the individual child and family. With Paediatric cardiac surgery provision in the UK currently under review any move than could potentially enhance the sustainability of such a fundamental service should be embraced. Whilst this audit is a small scale and single site it highlights significantly positive outcomes.

Further larger scale, multicentre audits are required to add further weight to these findings and provide comparison of mortality rates between fast-tracked and non fast-tracked cases.