

Long-term follow up is not indicated after routine interventional closure of persistent arterial ducts

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Introduction and Aims: Interventional closure of persistent arterial duct (PDA) is routinely performed. Potential side effects and complications include residual shunts, haemolysis, device embolisation, and obstruction to flow in the adjoining vessels. Follow up of these patients is frequently for many years after the procedure. It is unclear whether long term follow up is necessary.

The aims of the study was to determine if (1) immediate complications after the procedure resolve during follow up (2) to determine if any new complications develop during follow up and (3) the need for long term follow in patients after interventional PDA closure.

Methods: Single centre retrospective study of all patients undergoing interventional PDA occlusion between Nov 2002 and Nov 2011. Patient's demographics and post procedural follow up echocardiographic data were collected. Patients older than 16-years, those with additional cardiac disease requiring long term follow up, pre-existing flow disturbances in the aorta or branch pulmonary arteries, those that required surgical ligation of the PDA following the intervention, incomplete records and death not related to the procedure were excluded. The primary end point was discharge from outpatient follow up. Descriptive statistics were used.

Results: 201 patients, who underwent interventional occlusion of a PDA between November 2002 and December 2011, were included. Haemolysis did not occur in any of the patients. Six patients needed re-intervention (3 for device embolisation, 3 for residual shunt). Six had mild obstruction to flow in the adjoining vessels (1 in descending aorta and 5 in LPA), all, except one of which resolved by the first follow up (within three months). None of these required any intervention. All sequelae were found prior to discharge, whilst none developed later during follow up of up to three years. 111 patients were still under follow up.

Conclusions: Complications of interventional closure of PDA are observed immediately and do not develop after the first follow up (within three months). Obstructions to adjoining vessels tend to resolve spontaneously after the procedure by the time of the first follow up. Long term follow up is not indicated in cases when no complications are seen early after the procedure.