Angled Jones' tubes in children

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**Aim:** To report the outcome of transcaruncular lacrimal bypass surgery with angled Jones' tubes in children with canalicular obstruction or agenesis.

**Methods:** Retrospective analysis of the medical records of all children who received an angled Jones' tube, between 1995 and 2015 at the University Hospitals Leuven.

**Main outcome measures:** Patency and anatomic position of the tube, type and time lapse of the complications (major: tube displacement, obstruction; minor: conjunctival overgrowth, granuloma formation) and subjective relief of epiphora.

**Results:** Of 103 patients (127 eyes) who received an angled Jones' tube between 1995 and 2015, 7 (7%, 7/103) (8 eyes, 6%, 8/127) were children. There were 5 boys and 2 girls, with a mean age of 8.6 years (range, 5 -14 years; median, 8.6 years) at time of the Jones' tube intervention. The median follow-up was 11.5 years (range, 1.1-13.3 years). Four children had canalicular obstruction from herpes simplex canaliculitis and three had congenital agenesis. Tube extrusion occurred in two patients (29%, 2/7) at 5.9 years and 8.6 years after surgery. One of them also developed conjunctival overgrowth (14%, 1/7) at 2.2 years after surgery. The incidence rate for major tube complications is 4.9%/year.

**Conclusion:** The angled Jones' tube is suitable for insertion in children as young as 5 years old, and replacement with tubes of longer lengths is not required with age progression.