

# EXPERIENCES WITH TRANSCATHETER CLOSURE OF PATENT DUCTUS ARTERIOSUS IN PREMATURE INFANTS WEIGHTING LESS THAN 2 KILOGRAMS

**Jieh-Neng Wang, Yung-Chieh Lin, Min-Ling Hsieh, Yu-Jen Wei, Jing-Ming Wu**

Department of Pediatrics, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, Tainan, Taiwan

## BACKGROUND

Transcatheter closure of patent ductus arteriosus (PDA) in preterm babies remains a highly challenging procedure.

## OBJECTIVE

The aim of this study was to describe our experience with transcatheter device closure of PDA in symptomatic low birth weight premature infants.

## METHODS

Hospital records and catheterization reports of all premature babies who underwent transcatheter PDA closure since October 2014 in our hospital were reviewed. Basic demographics clinical information, echocardiographic, and angiographic data were recorded.

## RESULTS

Nine premature infants (three boys and six girls) born at gestational ages ranging between 23 and 31 weeks (median 28 weeks) were identified. All patients were symptomatic and received at least one course of indomethacin therapy. Median age and body weight at the time of the procedure was 32 days (13-48 days) and 1262 g (533-1950 g), respectively. There were three patients with body weight less than 1000 g (934, 836, and 533 g, respectively). The mean minimal ductal diameter was  $3.4 \pm 0.6$  mm. Devices used in this study were Amplatzer Duct Occluder II Additional Size (ADO II AS) (n=7), Amplatzer Vascular Plug I (n=1), and Vascular Plug II (n=1). Complete closure was achieved in all patients with no major procedural complications.

## CONCLUSIONS

We confirm the feasibility to undertake transcatheter PDA closure in symptomatic premature infants with body weight greater than 533 grams. Therefore, PDA closure can be considered as an alternative to surgery in premature babies.