

# The Amplatzer Duct Occluder II Additional Sizes Device (ADOIIAS) For PDA Closure Beyond the Neonatal Period: Initial Experience in Egypt

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## BACKGROUND:

The new Amplatzer Duct Occluder II Additional Sizes device is designed for the closure of small PDAs associated with small or shallow ductal ampullae. (2) The ADOIIAS, similar to its predecessor the ADOII, is made of nitinol braid and comprises two retention discs and a central portion that is designed to lie within the ductal lumen. The shape of the discs has been altered from curved to flat, and the retention discs have been reduced in size to minimize the risk of protrusion causing flow disturbance in the aorta or pulmonary artery (3). Implantation of ADO II AS is feasible for all types of PDA with a diameter  $\leq 4$  mm and for wide variety sizes of children even for small infants. The device is chosen so that the diameter of the waist would be approximately twice that of the narrowest part of the ductus, typically at the pulmonary end. The length is chosen so that the aortic disk would lie in the ductus, in a conical-tubular shaped ductus, or in the ampulla without extending in to the aortic lumen in other cases. The PDA can be closed from either the pulmonary or aortic routes (1). We present our experience with this new device beyond the neonatal period in Abu El Rish University Hospital.

## MATERIALS AND METHODS:

The first case was a 18 month old boy, 9 kg, with long tubular PDA, type E, measuring 3mm at pulmonary end, 4.6mm at aortic end and length 11.5mm. The decision was taken to use ADO II AS 5\*6, which was successfully deployed from the arterial side using 5Fr delivery system. The second case was a 2 year old girl, weight 11 kg, with PDA type E, pulmonary end 1.5mm, aortic end 4mm and length 5mm. This was closed with ADO II AS device size 3\*4 by retrograde approach. The third case was a 4 year old boy with PDA type C, pulmonary end 2mm, aortic end 2.5 mm and length 6mm which was closed by ADII AS device size 5\*4 also from the arterial approach.

## RESULTS:

Follow up echocardiography revealed no residual shunting and no protrusion of the device in aorta or left pulmonary artery in the 3 cases.

## CONCLUSION:

The ADOIIAS device is safe and effective for trans catheter closure of small to moderate ductus in infants and children.

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3. Sungur M, Karakurt C, Ozbarlas N and Baspinar O. Closure of patent ductus arteriosus in children, small infants, and premature babies with Amplatzer duct occluder II additional sizes: Multicenter study. *Catheterization and Cardiovascular Interventions* (2013) 82 (2): 245-252

