

Catheter Closure of Patent Ductus Arteriosus in Adult Patents Using an Outpatient Protocol.

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Introduction Transcatheter closure is the treatment of choice for the majority of patients with a patent ductus arteriosus (PDA). However, the standard technique of this procedure uses an arterial access and requires immobilization of the patients for 24 hours and may be associated with arterial complications. The aim of this study was to report experience with catheter closure of PDA in 68 consecutive adult patients the Cocoon PDA occluder on outpatient basis using an exclusive venous approach.

Methods The age of the patients ranged from 16-72 (median 36 years) and the weight from 52-74 Kg (median 64 Kg). The anatomy and size of PDA were defined by transvenous retrograde aortography using a Pigtail or a Berman catheter. The PDA occluder was implanted through an 8-9 F delivery sheath (DS). The procedure was guided using hand injections of contrast media through the DS and 2D and color Doppler echocardiography from suprasternal and parasternal long and short axis, respectively.

Results The PDA occluders were permanently implanted in 65/68 of the 68 patients. The mean PDA diameter (at the pulmonary end) was 3.8 ± 0.9 mm (range, 1.2 to 9.8 mm). The mean device diameter was 6 ± 3 mm (range 4 to 12 mm). Complete echocardiographic closure of the ductus at 1-month follow-up was observed in all 65 patients (100%). Eight minor groin venous hematomas were the only complications of the procedure. The hospital stay of the patients ranged from 6-8 hours.

Conclusions Exclusive transvenous PDA occlusion using combined angiographic and echocardiographic guidance is an effective and safe method that prevents the arterial complications of the standard approach. In addition, in adult patients, this technique, may be used on outpatient basis resulting in reduce hospital cost.