



PDA STENTING IN NEWBORN WEIGHTING LESS THAN 2 KG: REPORT OF 3 SUCCESSFUL CASES

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Background:

Lower risks of complications and mortality made ductal stenting a better therapeutic option over classic surgical shunts. The risks of surgery in a premature or low birth weight newborn can be even higher. Ductal stenting can be difficult due to the problems of vascular catheterization and catheter manipulation. With today's generation of coronary stents which have better profile, flexibility and trackability, ductal stenting may be achieved safely and with considerably less difficulty than previously described, especially in very premature newborn baby

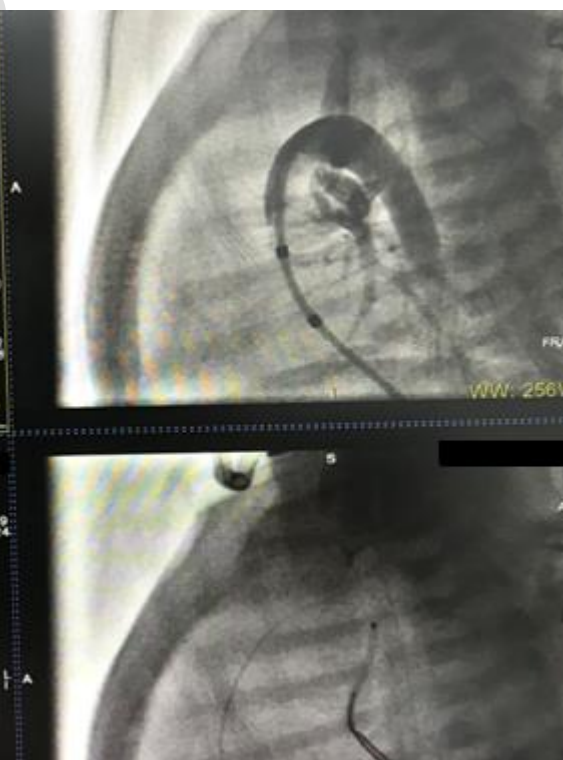
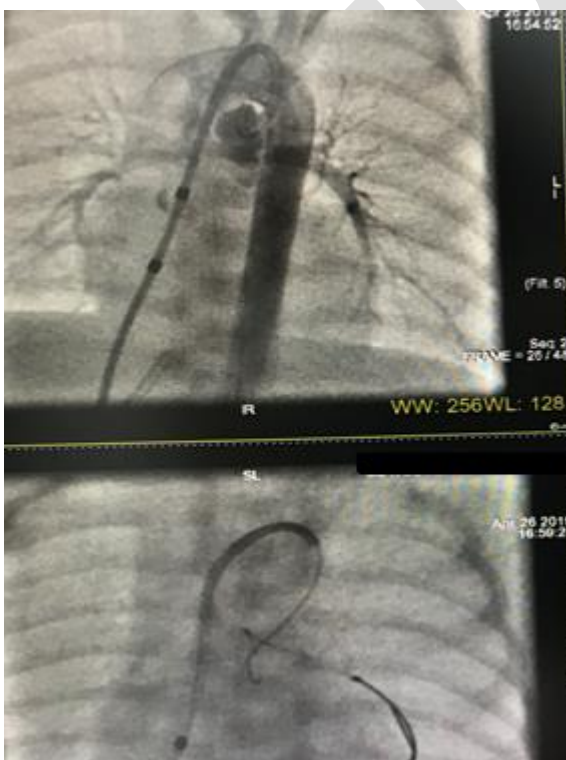
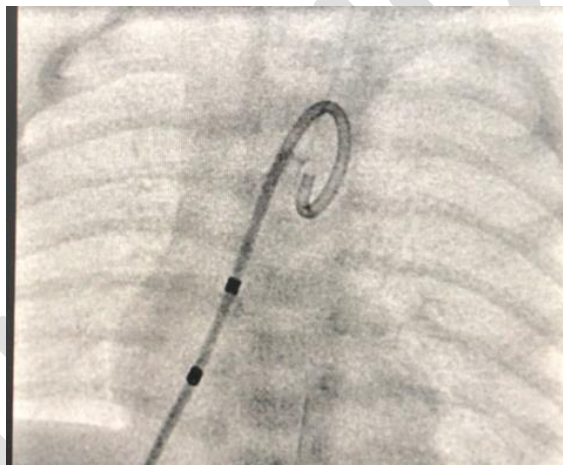
Method:

Several case reports

Results:

Case 1

A 12-day-old 1800-gram newborn with duct dependant tetralogy of Fallot, severe right ventricular outflow tract obstruction. Her saturation was 72% under prostaglandin infusion and artificial ventilation. She was then catheterized. To prevent femoral artery damage, we obtained only a femoral venous access and with the help of a 5 Fr guiding catheter, we deployed a 3.5 x 15 mm coronary stent in her duct. Oxygen saturation was increased to 85%. She developed a transient bradycardia with the passage of guidewire and balloon which was resolved after dilation of the stent.



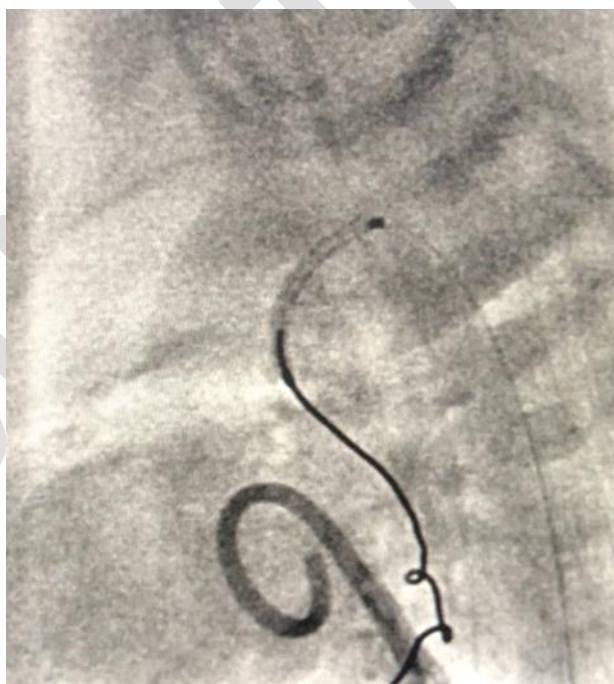
Case 2

A 5-day-old 2000-gram newborn with Down syndrome, pulmonary atresia and VSD and a saturation of 62% was catheterized. A 5 Fr sheath was used for the femoral vein catheterization, and a 4 Fr one for her femoral artery. We deployed a 4x15 mm coronary stent without using a guiding catheter. A venous catheter was used to guide the best place for stent deployment. Oxygen saturation was increased to 83%. No vascular complication was occurred.



Case 3:

A 3-day-old 1100-gram premature newborn with pulmonary atresia and VSD and a saturation of 62% was catheterized. Since the PDA's origin is from the descending Aorta, an antegrade approach from femoral artery is preferred. A 5 Fr femoral vein sheath was used to navigate the position of the stent and a 4 Fr one for her femoral artery. We deployed a 4x13 mm coronary stent without using a guiding catheter. The 0.014 inches guidewire was stuck in the distal left pulmonary artery, which was then successfully withdrawn by using a microcatheter. Oxygen saturation was increased to 90%. No vascular complication was occurred.



Conclusion:

PDA stenting in small newborn can be feasible and effective. Special care is required for vascular catheterization and catheter manipulation.