

Case: Neonate with severe aortic stenosis, dysplastic AV, LV mild dysfunction

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The clinical presentation of patients with congenital aortic stenosis varies, both in age and symptoms. While many patients with relatively mild aortic valve disease may remain asymptomatic for many years, neonates with critical aortic stenosis present with life-threatening disease that requires prompt therapy. For neonatal critical aortic stenosis, McCrindle et al¹ compared outcomes of surgical versus transcatheter balloon valvotomy and found that both approaches achieved similar outcomes in terms of survival and reintervention. Since that report, which approach is better remains still controversial. However, the majority of centers are favoring balloon valvotomy these days, likely because the initial decision is in the hands of the cardiologists who are the first physicians to care for the patient and because the expertise in balloon valvotomy has been easier to develop than advanced surgical techniques². During the last 2 decades, an improvement of the techniques of aortic valve repair and the expansion of their use in the adult population are achieved and it is possible that the surgical procedures performed nowadays are superior to those practiced in the past. Recently, Siddiqui et al² reported that surgical valvuloplasty achieved better results than balloon valvuloplasty and recommended that in order to achieve a more durable repair it is necessary to de-bulk the leaflets from all thickening and nodular dysplasia and to resuspend with patches the incised unsupported portion of the leaflets.

We should not forget that both surgical and balloon valvuloplasty are only palliative in nature and that probably the majority of these patients will require another reintervention. As we improve our knowledge of how to care for these patients, collaboration between the interventional cardiologist and the surgeon continues to be important³.

1. McCrindle BW, Blackstone EH, Williams WG, Sittiwangkul R, Spray TL, Azakie A, Jonas RA. Are Outcomes of Surgical Versus Transcatheter Balloon Valvotomy Equivalent in Neonatal Critical Aortic Stenosis? *Circulation*. 2001;104:I-152-158.
2. Siddiqui J, Brizard CP, Galati JC, IyengarAJ, Hutchinson D, Konstantinov IE, Wheaton GR, Ramsay JM, d'Udekem Y. Surgical Valvotomy and Repair for Neonatal and Infant Congenital Aortic Stenosis Achieves Better Results Than Interventional Catheterization. *Journal of the American College of Cardiology*. 2013;62:2134-2140.
3. Backer CL. Infant Congenital Aortic Valve Stenosis. *Journal of the American College of Cardiology*. 2013;62:2141-2143.