

# Arterial Duct Occlusion with Polyvinyl Alcohol Pablo Diaz Device Echo-Transesophageal Follow-Up, Lateral Aortography. Report a Unique Case

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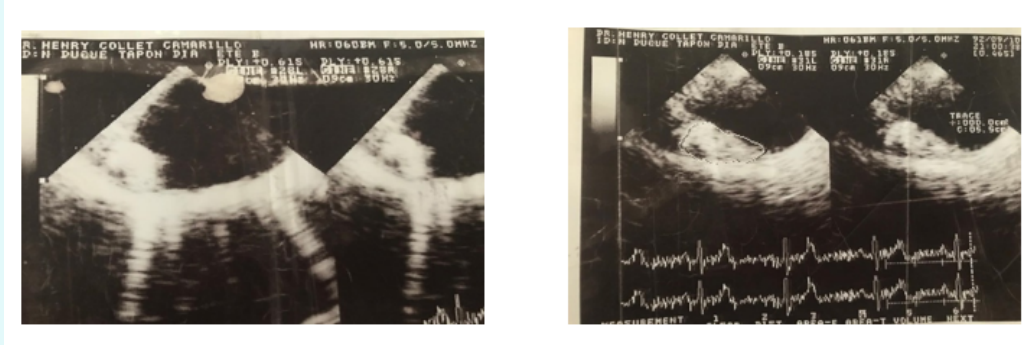
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The patent ductus arteriosus is an entity that connects the aortic artery with the pulmonary artery. This Communication is made when the mother of the baby is in gestation. This is a communication in the fetus of the roof of the pulmonary artery and the descending aorta, and it is completely physiological, later at birth it closes physiologically. The ductus arteriosus is an Anatomical structure essential in the life of the fetus and if its anatomical closure is not completed in the newborn stage, it is considered a congenital heart disease. It was first described in the fetus by Galen in the year 129 - 200 and who spoke of its postnatal closure in the virchow century assured that the closure of the ducts is due to the contraction of the smooth muscle in its wall. The mechanism of ductus closure occurs in two phases, the first functional one that occurs in the first hours of birth and is due to the vasoconstriction generated by the smooth musculature of the ducts themselves. There is a closing of 50% at 24 hours and 90% at 48 and 100% at 72 hours. The second phase is of anatomical type of closure occurs after several days due to the production of acid and hyaluronic by the endothelial cells, which begin to proliferate, producing progressive thickening of the intima tunica, and ischemia of the middle layer due A occlusion of the vasorum vasas on which it induces apoptosis. Cyclooxygenase inhibitors can be used and if it persists, a hyperdynamic state of circulation is with a hyperdynamic beat, machinery murmur in the second intercostal space and signs heart failure. The conductus arteriosus is present classically the treatment has been surgery with ligation of the ducts, recently ductus ligation has been described by thoracoscopy and a posterior extrapleural approach in children and with the advent of pediatric interventional cardiology, it appears in 1967, the first percutaneous closure.

The polyvinyl alcohol device has been designed and perfected by a Venezuelan interventional cardiologist, Dr. Pablo Díaz, a Zuliano physician who perfected this technique.

This technique described by porstman in 1967 is a device for ivalon or polyvinyl alcohol manufactured by dr diaz. 2 mm small ducts there is general consensus for the use of coils with excellent hemodynamic results, total occlusion of the ducts. Amplatz devices made of nickel with titanium occluded in the ductus in 95 percent ductoccluder. 70 percent immediately and 100 percent at 6 months. with coils in small ductus. There are also excellent results with jackson's coil. We report the images of an occlusion of ductus arteriosus in an adolescent male patient with this device and we observed by echotransesophageal at the aortic level part of the device in its aortic portion. We remember the anchorage is through the guide in the aorta, pulmonary artery, in lateral projection the liberation was performed. The echo transesophageal was performed with a monoplane alaca device with sedation se the figure aortic view you can see the device in this view.

The amplatzer devices are performed through the pulmonary artery and aorta. With these devices, a lateral projection aortography must always be performed. We report the first images of this device by transesophageal echo and the closure with this device was in Pablo's series. Diaz 100 percent occlusion [1-3].



**Figure :** Occlusion of arteriosus arteriosus.

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