

SURGICAL TECHNIQUE

Safe technique for the treatment of Cor Triatriatum Dexter

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Cor triatriatum dexter is an infrequent finding, which can produce hemodynamic changes by itself or in conjunction with the defects it is associated with. We describe a technique from a simple and practical perspective for removal of the residual membrane and subsequent correction.

Key words: Atrial septal defect; Coronary sinus, Cor triatriatum dexter.

El cor triatriatum dexter es un hallazgo infrecuente, que puede llegar a producir alteraciones hemodinámicas por sí mismo o en conjunto con los defectos al que se asocia. Nosotro describimos una técnica desde una perspectiva sencilla y práctica para la extracción de la membrana residual y la corrección subsecuente.

Palabras clave: Comunicación interauricular; Seno coronario; Cortriatriatum dexter.

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Cor triatriatum is a congenital malformation defined by an abnormality in septation on the left or right atrium, reason why it exists in its left variety (sinistrum or sinister) and right variety (dexter), both of them very infrequent. In relation to the dexter variety, from the first description by Rokitsansky in 1875 [1,2], there are reports of isolated cases, so an incidence of 0.025% of all congenital heart diseases is estimated [3]. This is caused by a persistence of the right leaflet of the venous sinus, which under normal conditions regresses around the 12th week of gestation [1-5]. The clinical manifestations will depend on the degree of obstruction and the presence or absence of other structural anomalies, such as atrial septal defect, pulmonary and tricuspid valve abnormalities, among the main ones [1,2,3,5], and their treatment is directed towards optimal right ventricular function that ensures an adequate pulmonary flow [1,3,4,5] since it may be reduced due to an obstruction in the entrance of the flow to the right ventricle due to a right ventricular hypoplasia or the same membrane residual [1,4].

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We performed the correction of a cor triatriatum dexter in a 10-year-old female patient diagnosed with an atrial sep-

tal defect type ostium secundum plus bicameral right atrium secondary to a vestigial membrane, with a report on the contrast-enhanced echocardiogram to the right ventricle, and little passage of bubbles through the membrane to the upper portion of the right atrium and to the second beat with bubbles reaching the left atrium.

This technique is performed through a conventional approach with median sternotomy, aortic and bicaval cannulation, administration of antegrade crystalloid cardioplegia and maintaining a general temperature of 32 °C. It is entered through a right atriotomy to identify each of the structures and the remnant membrane that is located between the coronary sinus and the inferior vena cava and goes in direction of the atrial septum at the margin of the oval fossa (Fig. 1A). The resection of the cephalic membrane at caudal is then performed with scissors. Special care was taken in order to avoid opening the left atrial roof (Fig. 1B) (Fig. 2A), while identifying again all structures and defects (Fig. 1C) (Fig. 2B).

Finally, reinforcement was made in the roof of the left atrium with continuous suture with polypropylene 6-0 USP and closure of the atrial septal defect by continuous suture with polypropylene 5-0 USP (Fig. 1C). The closure of the right atrium is done in a conventional manner. The rest of the operation was performed as usual.

COMMENT

In most cases, cor triatriatum dexter is reported as a finding within necropsy studies [1,2,4], while in some others as

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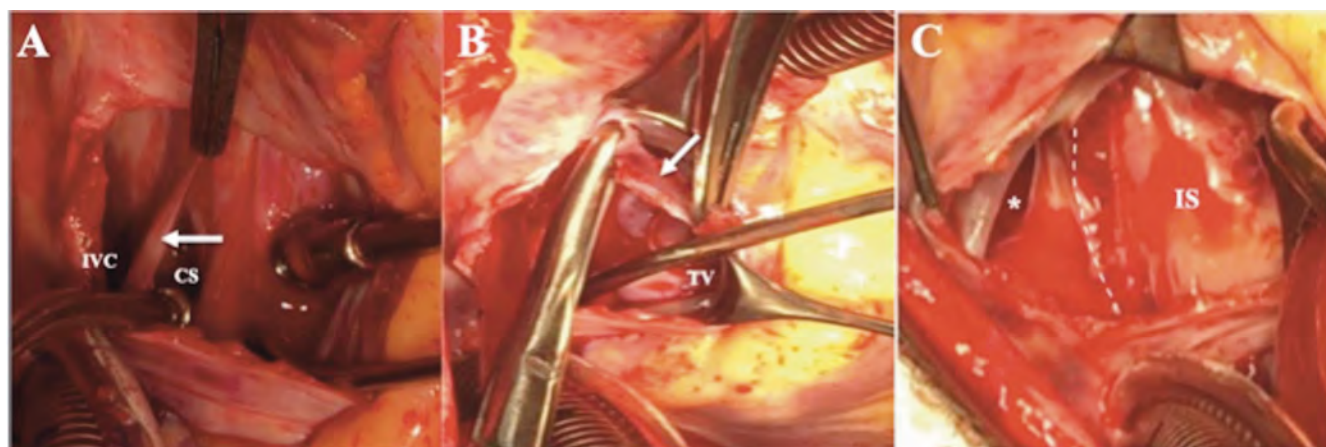


Figure 1. Procedure sequence. A) Identification of remnant membrane (white arrow) and surrounding structures. B) Remnant membrane excision. C) Area after the resection procedure (dashed lines) and atrial septal defect (*). IVC (Lower vein cava), CS (Coronary sinus), TV (Tricuspid Valve), IS (Interatrial septum)

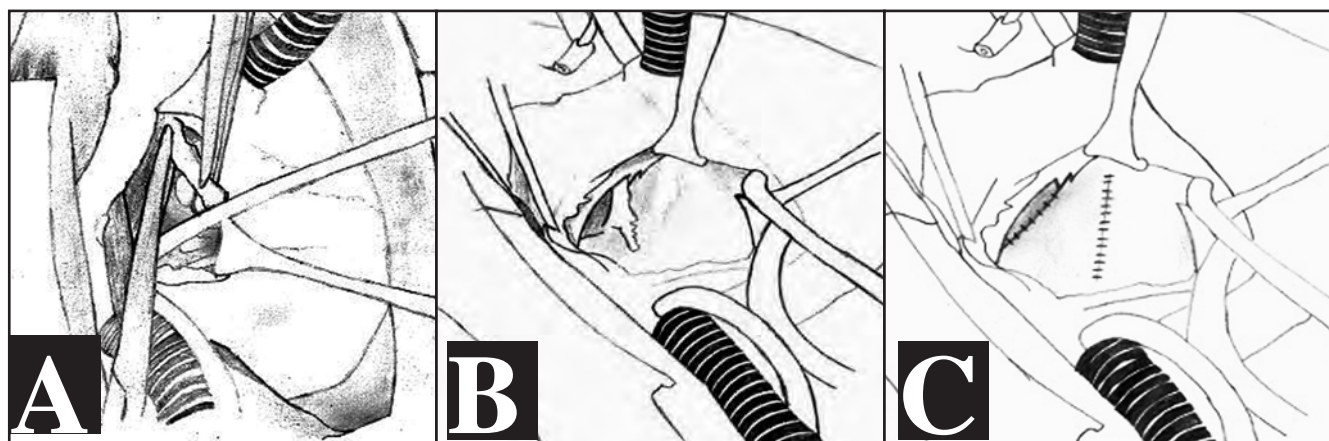


Figure 2. Schematic illustration of the resection steps. A) Identification and cutting of the remaining membrane in the direction of cephalic to caudal with a Metzenbaum scissors. B) After the resection, identification of the surrounding area with adjacent structures, discarding lesions, as well as identification of the interatrial defect. C) The closure of the interatrial communication with continuous suture and the free area of the remaining membrane are shown.

an incidental finding during assessment for other congenital heart diseases. Therefore, concomitant treatment of congenital heart disease is suggested, same by interventional or surgically treated [1,3,6,7].

In current and available literature, there is no description of the technique for the vestige of membrane, nor its limits. Therefore, we present a simple and practical approach for extraction of the residual membrane together with direct closure of the atrial septal defect. Finally, in our case, no further procedures were necessary since our patient did not present other structural anomalies.

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