Letter to the Editor

CONGENITAL TRICUSPID INSUFFICIENCY DUE TO A CLEFT IN TRICUSPID ANTERIOR LEAFLET ASSOCIATED WITH PERIMEMBRANOUS VSD*

An unusual case report

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To the Editor

Congenital tricuspid insufficiency (TI) due to a cleft in the anterior tricuspid leaflet is a rare congenital cardiac anomaly, with only 19 cases reported in the English literature[1-4]. Although most of the cases are associated with atrial septal defect or pulmonary stenosis, it can occasionally be found as an isolated anomaly. We report herein an infant who had congenital TI due to a cleft in the anterior tricuspid leaflet with perimembranous ventricular septal defect (VSD) and patent foramen ovale (PFO). We did not find any reported case with congenital TI, VSD and PFO in the literature.

A nine-month-old girl was hospitalized with the diagnosis of TI and VSD. Because of severe right heart failure and pulmonary hypertension, prompt surgical correction was necessary. On physical examination she was severely cachectic with a body weight of 5300. Minimal cyanosis was noticed; she had a systolic harsh murmur in the left 3rd space. Full blown manifestation of right heart failure was present. Echocardiographic and angiographic examination showed grade 3 TI and tricuspid annular dilatation in addition to perimembranous VSD of moderate size. Echocardiographically, TI was thought to be due to abnormal chordal attachment to the edge of the defect.

Precise diagnosis was made during the operation, In addition to a perimembranous VSD, a deep cleft in the anterior tricuspid leaflet (Fig. 1) and a small patent foramen ovale (PFO) were found. The tricuspid annulus was 35 mm in diameter. There was no abnormality in the chordal attachment. Ventricular

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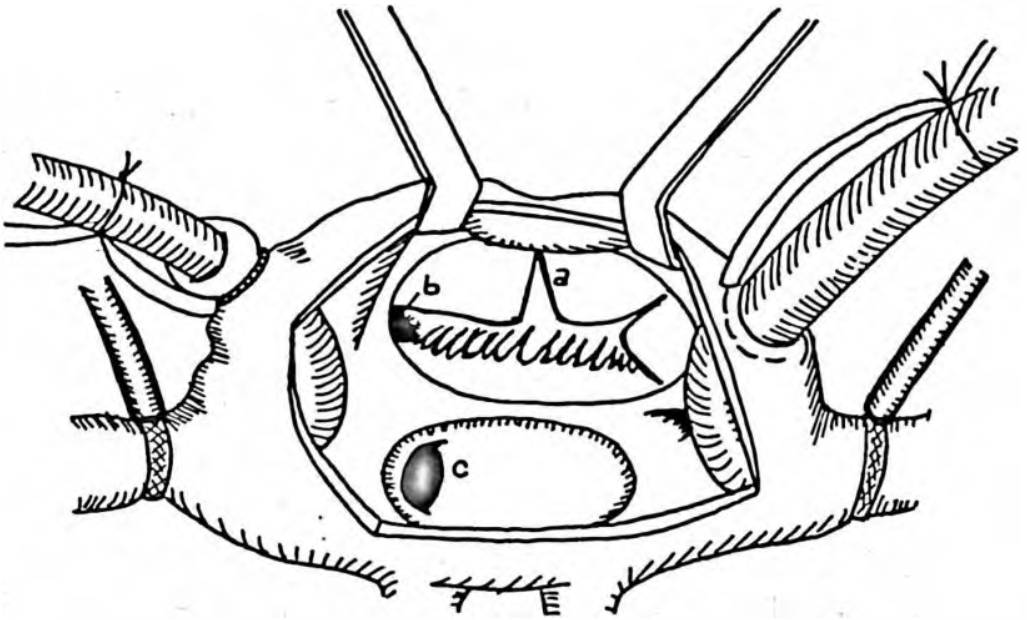

Fig. 1: Schematic drawing of the anomaly (right atrial view). a: cleft in anterior leaflet of the tricuspid valve, b: perimembranous VSD, c: small PFO.

septal defect was closed by a Dacron patch in the usual manner via right atriotomy, and the cleft was repaired by running sutures with 5/0 polypropylene. In addition, De Vega's annuloplasty was accomplished.

Postoperative course was uneventful and she was discharged on the 7th day. She had gained 4200 g and was doing well six months after the operation. On physical examination there was no right heart failure despite no diuretic therapy. Follow-up echocardiography showed a minimal insufficiency in the tricuspid valve.

There have been reports of cleft in the tricuspid valve as an isolated anomaly or in association with ASD, pulmonary stenosis, transposition of great arteries and atrioventricular connection defects. To our knowledge, this is the first reported case of congenital TI due to a cleft in the anterior leaflet of the tricuspid valve in association with perimembranous VSD and PFO.

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