neural-tube defects and cardiovascular defects. Cardiac malformations were also found to be associated with carbamazepine as polytherapy (2, 3). One case has been reported with carbamazepine usage as monotherapy during pregnancy where the child was diagnosed with transposition of the great arteries and atrial septal defect following birth (5).

When evaluated with the previously reported case, our case suggests that the concurrence of carbamazepine usage, thought to be reasonably safe as monotherapy during pregnancy, and TGA development is not coincidental. It would be prudent to suggest an association between the various drugs and this malformation, though it is clear that two cases do not make the association casual and more extensive studies are required. However, we feel that keeping the concurrence of cardiac malformations in mind in epileptic pregnant mothers using carbamazepine would be prudent.

Our aim was to draw attention to the rare concurrence of maternal usage of carbamazepine, and cardiac anomaly in the child by presenting a case.

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Correctable causes of left ventricular outflow tract obstruction may not be absolute contraindications for arterial switch operation

Sol ventrikül çıkış yolu obstrüksiyonu arteryel "switch" operasyonu için engel midir?

Dear Editor,

Transposition of the great arteries (TGA) is one of the most common congenital heart anomaly. About 20% of TGA cases have a large or small ventricular septal defect (VSD). Only 5% have associated anatomic left ventricular outflow tract obstruction (LVOTO) (1).

We emphasize that the arterial switch operation (ASO) is the best option for all patients with TGA if there is no absolute contraindication. A presence of LVOTO in TGA led surgeons to use a Mustard, Senning, Rastelli or REV procedures. In recent studies fibrosis was diagnosed with cardiac magnetic resonance imaging with Gadolinium in the right ventricle of some patients who underwent Mustard or Senning operation for the treatment of the TGA, fibrosis may be cause of severe ventricular arrhythmias due to ventricular repolarization anomaly (2).

Excellent long term results are obtained in operative survivors following the arterial switch operation (3). Reoperation incidence in patients who underwent successful primary anatomic repair is lesser than other operative procedures which are available for treatment of TGA. The advantages of arterial switch operation also include anatomic correction of ventriculoarterial connection, minimal prosthetic material load, and avoidance of extracardiac conduit (4).

Arterial switch operation must also be the first preference in patients with TGA having LVOTO due to correctable causes (5). In this case, we considered subpulmonary fibromuscular tissue, which causes LVOTO, is correctable with resection. We herein report an application of this approach; ASO in a case of TGA with a malaligned VSD and LVOTO caused by subpulmonary fibromuscular tissue and bicuspid pulmonary valve.

A 1-year-old male, with cyanosis since birth, was admitted to our institute with diagnosis of TGA, VSD and severe pulmonary stenosis. Two-dimensional echocardiography demonstrated a single moderate size non-restrictive VSD with posterior outlet septal malalignment and subpulmonic fibromuscular tissue (Fig. 1, 2) accompanied by severe

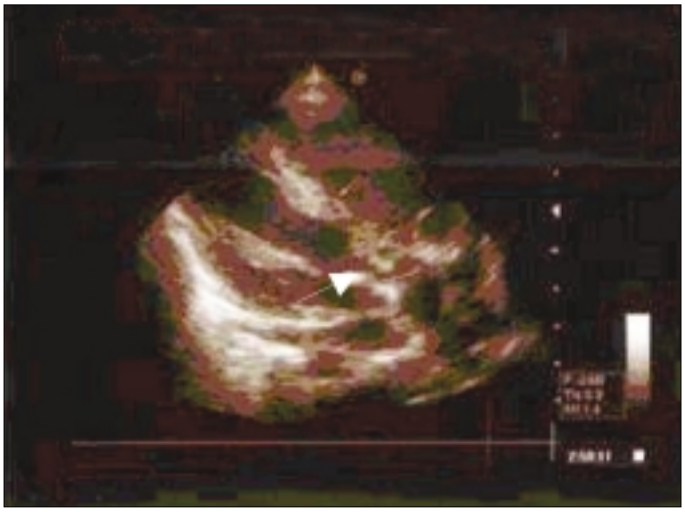

Figure 1. Preoperative 2D echocardiogram shows LVOTO due to subpulmonary fibromuscular tissue (white arrow)
LVOTO- left ventricular outflow tract obstruction

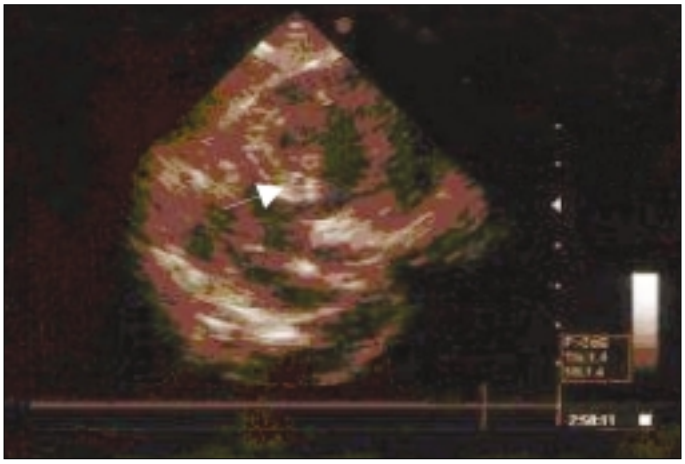

Figure 2. Preoperative 2D echocardiogram shows anterior malaligned ventricular septal defect

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pulmonary stenosis and bicuspid pulmonary valve and usual coronary pattern. The patient underwent operation through a median sternotomy using standard cardiopulmonary bypass with cold blood cardioplegia. Right atriotomy revealed a single malaligned VSD which repaired by a Dacron patch. Subpulmonic excess tissue was resected through a transpulmonary approach. The ASO was performed by standard techniques. No residual gradient between left ventricle and neo-aorta was measured postoperatively (Fig. 3). The intensive care unit stay was uneventful and the patient was discharged from hospital at sixth postoperative day.

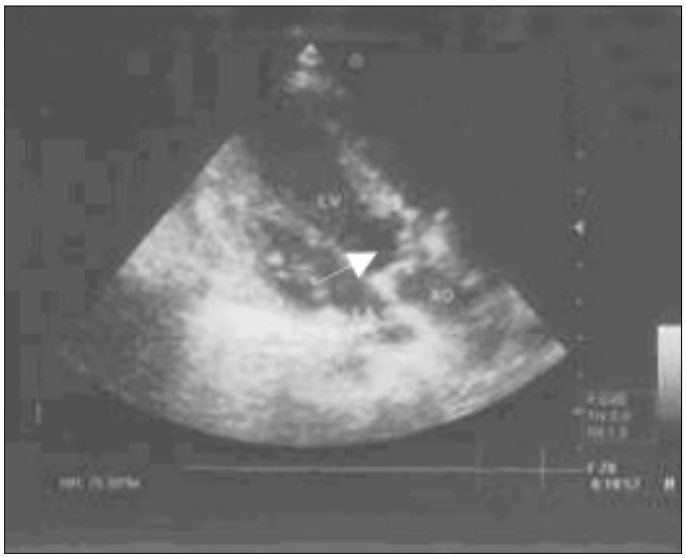

Figure 3. Postoperative sixth- month 2D echocardiogram shows no hemodynamically significant left ventricular outflow tract obstruction (white arrow)
AO- aorta, LA- left atrium, LV- left ventricle

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Koarktasyona eşlik eden aort patolojilerinde cerrahi yaklaşım

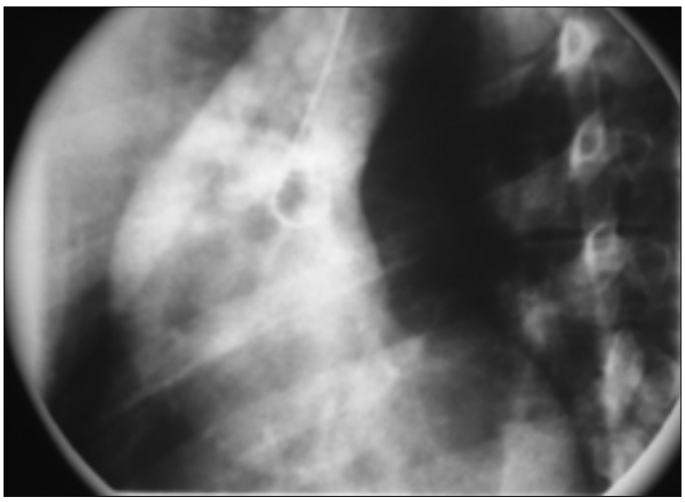
Surgical approach to the cases of coarctation in combination with aortic pathologies

Aort koarktasyonuna %11 oranında ventriküler septal defekt (VSD) ve %7 oranında diğer kardiyak anomaliler eşlik etmektedir. Erişkin yaşta görülen aort koarktasyonuna eşlik eden aort veya aort kapak patolojisinin bulunduğu durumlarda cerrahi yaklaşım için oturmuş belli bir görüş birliği yoktur. Aort koarktasyonuna eşlik eden patolojilerde; ekstra anatomik baypas yöntemi ile tamir ettiğimiz 1 olguya ve çift aşamalı tamir uyguladığımız 2 olguya ait sonuçları sunmaktayız.

Biküspid aort, 3. derece aort yetmezliği ve çıkan aort anevrizmasının (en geniş yerde 7.5 cm) eşlik ettiği 90 mmHg gradiyentli aort koarktasyonu bulunan 1. hastada (Resim 1) inen aortaya 16 mm spiralli Politetrafloroetilen (PTFE) tüp greft anastomozunu takiben total sirkulatuvar arrest altında Bentall prosedürü ile "bileaflet" kapaklı konduit replasmanı uygulandı. Hastanın ısıtılması esnasında Dacron greftin sağ lateral tarafına PTFE tüp greftin serbest ucu anastomoz edildi (Resim 2).

İkinci ve üçüncü hastalarda biküspid aort, 3-4. derece aort yetmezliği ve aort koarktasyonu mevcuttu (Resim 3). Farklı olarak ikinci hastada sol ventrikül (SV) çapları normalin üst sınırındaydı (SV diyastol sonu: 57 mm, SV sistol sonu: 41 mm; SVdiyastol sonu volüm: 157 ml, SV sistol sonu volüm: 75 ml). Aort yetmezliğinin şiddetli olması ve konjestif yetmezlik bulgularının olması nedeni ile önce koarkte segment tamir edilirse operasyon sırasında koroner iskemi gelişebileceği düşünüldü (1, 2). İlk seansta bileaflet mekanik aort kapak replasmanını takiben postoperatif 2. ayda koarkte segmente Dacron greft ile "patchplasty" ameliyatı uygulandı. Aort yetmezliğinin konjestif yetmezlik bulgularına yol açmadığı 3. hastada öncelikle ard-yükün azaltılması amacıyla koarktasyona Dacron greft ile "patchplasty" operasyonu uygulandı. Postoperatif 3. ayda üçüncü derece aort yetmezliğinin devam etmesi üzerine aort kapak replasmanı yapıldı.

Çıkan aort anevrizması koarktasyona sıklıkla eşlik eden aort patolojisidir. Aort anevrizmasının eşlik ettiği aort koarktasyonunda; koarktasyon tamirine öncelik verilmesi sol ventrikül önündeki gradiyenti kaldırarak anevrizmatik segmentteki duvar direncini düşürür, anevrizmatik segmentte disseksiyon ve rüptür riskini azaltır ve ikinci ameliyatta daha güvenli arteryel kanülasyon imkanı tanır (3). Koarktasyon tamir edilmeden anevrizma tamirinin yapılması durumunda ise yüksek basınç nedeni ile aortik sütür hatlarında kanama riski artar. Koarktasyona eşlik eden geniş



Resim 1. Çıkan aort anevrizmasının ve aort yetmezliğinin kateterizasyon görünümü