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Case Report

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Severe Aortic Coarctation Incidentally Diagnosed at Breastfeeding Women with Acute Coronary Syndrome

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ABSTRACT

This paper reports a very rare and an original case of a severe coarctation of aorta (CoA) that incidentally diagnosed at breastfeeding young women who presented with acute coronary syndrome. CoA is a complex congenital malformation and accounts for 5-10 % of all congenital heart disease. It is usually diagnosed in childhood with significant symptoms but many asymptomatic patients remain undiagnosed until adulthood. Also CoA is one of the reasons of secondary hypertension and premature coronary artery disease.

Key words: *Aortic coarctation, acute coronary syndrome, breastfeeding, hypertension*

Akut Koroner Sendromla Başvuran Emziren Kadında Rastlantısal Saptanan Ciddi Aort Koarktasyonu

ÖZET

Bu yazıda oldukça nadir rastlanan ve orjinal bir vaka olan akut koroner senrom ile başvuran genç kadında rastlantısal olarak tanı konan ciddi aort koarktasyonu sunulmuştur. Aort koarktasyonu kompleks bir doğumsal anomalidir ve tüm doğumsal kalp hastalıklarının %5-10'nu oluşturmaktadır. Sıklıkla çocukluk çağında ciddi belirtiler nedeniyle tanı konur ancak belirti vermeyen hastalar yetişkin çağa kadar tanı alamayabilirler. Ayrıca aort koaktasyonu sekonder hipertansiyon ve erken koroner arter hastalığı nedenlerinden biridir.

Anahtar kelimeler: *Aort koarktasyonu, akut koroner sendromu, emzirme, hipertansiyon*

INTRODUCTION

CoA one of the complex congenital heart diseases, accounting for %5-10 of live births with congenital heart defect, with an incidence of 0.3 to 0.4 per 1000 (1). CoA affects more males than females (2). It generally manifests as a discrete narrowing of the descendant aorta. It is commonly diagnosed in childhood with particularly heart failure symptoms, surgery is the preferred treatment in this population. Some patients with CoA remain undiagnosed because of less severe initial narrowing or to the development of colleteral circulation. Most of these patients present with early-onset or resistant hypertension(3).

CASE

A 29-year-old breastfeeding woman referred to our hospital with the suspicion of acute coronary syndrome. She had a history of hypertension for 10 years. Previously she had been on amlodipine treatment. Systemic hypertension was the only known cardiovascular risk factor for coronary artery disease. She had retrosternal chest pain for nearly 8 hours. Her admission blood pressure was 210/110 mmHg on both arms. Bilateral femoral pulsations were diminished. The cardiac examination was unremarkable. Twelve-lead resting electrocardiography revealed inverted T-waves in the inferior leads (II, III, and aVF). The cardiac marker was abnormal at admis-

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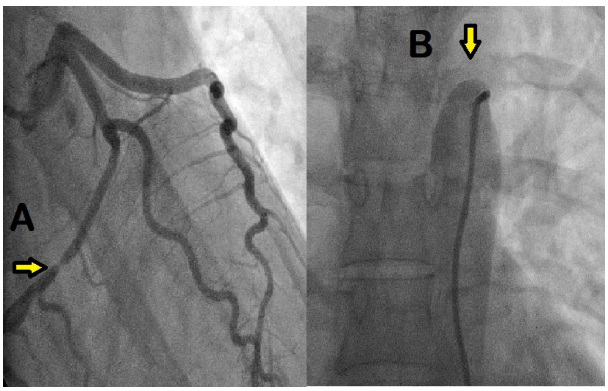

Figure 1. *A: Coronary angiography showing significant left circumflex lesion; B: Aortography showing severe coarctation of the aorta*

sion (Troponin I: 5.1ng/dl (reference value:0,12and 0,60 ng/ml)).

Coronary angiography was failed via the femoral approach because of severe CoA (Figure 1B). Therefore left radial artery was prefered. Coronary angiography revealed significant stenosis in the distal part of left circumflex artery (Figure 1A). Magnetic resonance angiography supported the diagnosis of severe CoA localized distal to the left subclavian artery (Figure 2A and 2B). Transthoracic echocardiographic examination was performed. Echocardiography showed left ventricular hypertrophy and there was no marked wall motion abnormality. From the suprasternal view there was a 51 mmHg systolic gradient in the descendant aorta. Patient was referred to a tertiary medical center for a balloon angioplasty and stenting of the coarctation.

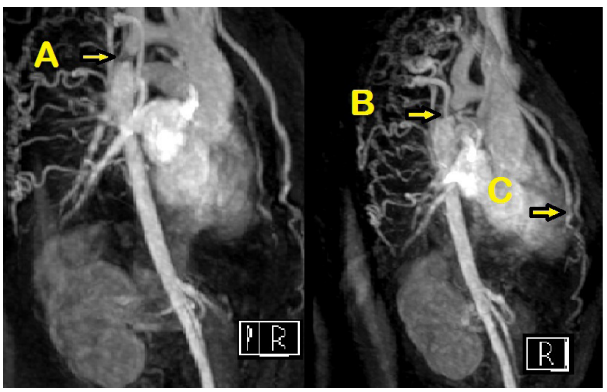

Figure 2. *A-B: Magnetic resonance angiography demonstaring severe coarctation of the aorta distal to the left subclavian artery and also marked enlarged collateral arteries; C: magnetic resonance angiography also showing significant left circumflex lesion*

DISCUSSION

CoA is a complex congenital malformation of the aorta that obstructs flow and is typically located distal to the origin of left subclavian artery at the insertion of the ductus arteriosus. It accounts for %5-10 of all congenital heart disease(4,5). CoA is usually diagnosed in childhood with significant symptoms and typical physical findings. But many asymptomatic patients remain undiagnosed until adulthood. And some of misdiagnosed symptomatic adult coarctation patients are treated only as systemic hypertension (4,5). There are several treatment options for CoA; balloon angioplasty, stent implantation and surgery (6). Previous studies showed similar reduction in peak systolic gradient with balloon angioplasty and surgery. However a trend exists to perform percutaneous intervention as the first choice treatment of CoA, there is no definite proof of a marked benefit for balloon angioplasty or surgery as the primary treatment of CoA for now (7). Surgery especially remains the treatment of choice in neonates (8). On the other hand stent implantation has shown excellent short-term results in both children and in adults with native coarctation (8).

We report an original case of CoA incidentally diagnosed during cardiac catheterization. The patient had a vaginal delivery without complication and remained undiagnosed until she was presented with acute coronary syndrome. Yesilay and colleagues (9) have reported similar case report and to the best of knowledge this is the second case of a severe CoA incidentally diagnosed during cardiac catheterization of an acute coronary syndrome.

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