

Subclavian Artery Stenosis as a Hint of Takayasu Disease Diagnosis

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Abstract

Introduction: Takayasu arteritis is a rare, systemic, inflammatory vasculitis of unknown etiology [1]. It can manifest as isolated, atypical, and/or catastrophic disease. It can involve any or all of the major organ systems [1,2]. Takayasu arteritis is an inflammatory disease of large- and medium-sized arteries, with a predilection for the aorta and its branches. Advanced lesions demonstrate a pan arteritis with intimal proliferation [3].

Objective: To present a case which confirmed as Takayasu by discovering the subclavian artery stenosis.

Case Relate: 12 years old girl presented with weakness, tiredness and musculoskeletal pain from about 6 months, the pain associated sometimes with low grade of fever.

Labs showed high inflammatory parameters.

MRA (Magnetic resonance angiography) Showed sever stenosis in the subclavian artery near its origin from aortic arch.

Cardiac cath done and showed sever stenosis in the origin of the subclavian artery from the aortic arch, other arteries looked.

So diagnosed as Takayasu disease, Prednisolone was started and referred to the cardio vascular team.

Conclusion: Takayasu is a rare disease, increased awareness of this condition leading to timely diagnosis and appropriate treatment may improve outcomes in this rare, yet potentially devastating, disease.

Diagnosis of the chronic diseases is difficult most the time, so we have to consternate on the physical examination because sometimes simple findings will lead to the correct diagnosis and then to the correct management.

Keywords: Takayasu Disease; Subclavian Artery; Stenosis

Introduction

Takayasu arteritis is a rare, systemic, inflammatory vasculitis of unknown etiology [1] that commonly occurs in woman younger than age 50 years; however, it has been reported in patients as young as age 6 months [1]. The incidences of TA were estimated to be 1 - 2 per million, Takayasu arteritis can manifest as isolated, atypical, and/or catastrophic disease. It can involve any or all of the major organ systems [1,2].

It is an inflammatory disease of large- and medium-sized arteries, with a predilection for the aorta and its branches. Advanced lesions demonstrate a panarteritis with intimal proliferation.

Lesions produced by the inflammatory process can be stenotic, occlusive, or aneurysmal [3].

So we will present our case which diagnosed as vasculitis and determined as Takayasu after discovering of sub clavian artery stenosis.

Case Report

12 years old girl admitted with weakness, tiredness and musculoskeletal pain from about 6 months, the pain associated sometimes with low grade of fever, negative post medical history, and negative family history.

On physical examination: afebrile, no breathing difficulty.

Chest: Good air entry bilateral, no hepatomegaly, no splenomegaly,

CVS: Normal S1 S2, we noticed that the peripheral pulse in the upper left arm so weak,

But in the right side and in the lower limbs very good, BP upper left = 60/38 mmHg, BP upper right = 130/85 mmHg

BP lower limbs = 105/79 mmHg.

Labs: WBC: 13000 (N 77%, L 22%), Hgb 10 g/dl↓ (MCV = 69), CRP = 50 ↑, ESR = 113↑, LDH = 330, HAV (IGM) Negative,

Widal test: Negative, wright test: negative, anti DNA: negative, Combs: negative.

Electrolytes, liver function, and renal function were normal.

Urine analysis: Normal.

Blood smear: Hypovolemic, hypochromic red blood cells, and no any strange cells.

Chest XR: Normal.

Abdominal ultrasound was normal.

Echocardiogram: Normal size and function.

MRA (Magnetic resonance angiography) Showed sever stenosis in the subclavian artery near its origin from aortic arch.

Cardiac cath done and showed sever stenosis in near the origin of the left vertebral artery from the aortic arch, and in the origin of the vertebral artery, other arteries looked normal (Figure 1 and 2).

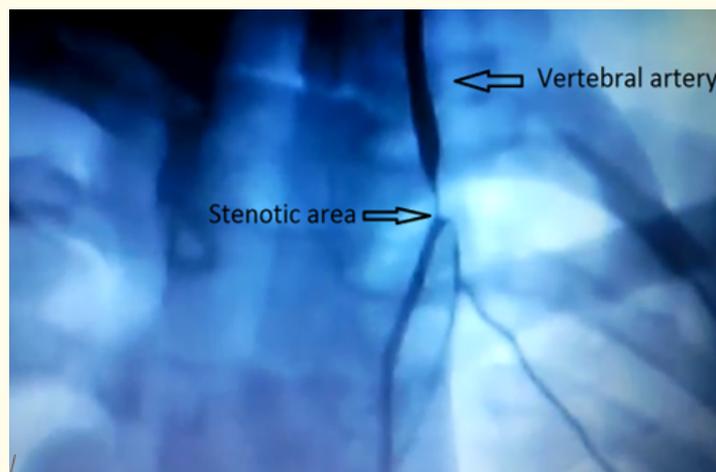


Figure 1: Angiogram showed stenotic area in the origin of left vertebral artery and the sever stenosis in the subclavian artery (the subclavian artery didn't filled because of the sever stenosis).



Figure 2: Angiogram showed stenotic area in left vertebral artery and left subclavian artery.

And because of the sever stenosis we preferred to send her to cardiovascular surgeon for further management better than balloon dilatation or stenting.

Our college in rheumatology team putted her on prednisolone and followed her, actually there was dramatically improvement in all symptoms after starting the treatment.

Discussion

Takayasu disease is a chronic inflammation of the large blood vessels that distribute blood from the heart, including the aorta and its main branches [4].

This can cause painful, cool, or blanched extremities, dizziness, headaches, chest pain, and abdominal pain. Other symptoms can include fatigue, weight loss, and low-grade fever [4,5].

The diagnosis is supported by the blood tests, such as a sedimentation rate (ESR) that suggest inflammation in the body.

Elevated blood pressure can be found in over half of the patients with Takayasu disease.

In fact, elevated blood pressure with an elevated sedimentation rate is distinctly uncommon in children and very helpful in suggesting Takayasu disease as a possible cause. Anemia (low red blood cell count) is frequent [5].

And as we saw in our case, she presented by fatigue and low grade fever.

Her labs showed high ESR, CRP and anemia which suggested wide spectrum of diagnosis.

By examination we found border line high BP in the right arm, weak pulse and low BP in the other arm which give us a strong hint to think about Takayasu disease.

Then the MRA and cath were done and showed the stenosis of the subclavian and the origin of the vertebral arteries which confirmed the diagnosis

So this rare finding in this rare disease lead us to the correct diagnosis.

Conclusion

Takayasu is a rare disease, increased awareness of this condition leading to timely diagnosis and appropriate treatment may improve outcomes in this rare, yet potentially devastating, disease.

Diagnosis of the chronic diseases is difficult most the time, so we have to consternate on the physical examination because sometimes simple findings will lead to the correct diagnosis and then to the correct management.

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