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TAKAYASU ARTERITIS (TAK) PRESENTING WITH RARE TRIGEMINAL NEURALGIA

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ABSTRACT

With a female-to-male ratio of three to one, Takayasu arteritis, also known as large vessel vasculitis, mostly affects the aorta and it's branches. Even during the first stage, Takayasu arteritis might manifest as a fever that has no known etiology. Carotidynia which is neck pain and, sometimes, additional thoracic and dorsal discomfort—are symptoms of the second phase, which starts with mural inflammation in the major arteries. The third stage is called the late stage, and it is marked by sporadic extremities claudication, arterial bruits, and weak or nonexistent pulses. Trigeminal neuralgia is a recurrent attack of intense, lancinating pain that is localized to a few small areas of the face and serves as it's defining characteristic. A 59-year-old female patient was admitted to the general medicine ward with the primary complaints of widespread weakness, numbness, and tingling in the left face, arm, or leg, blue color discoloration over the hands or fingertips when exposed to cold for 2-3 years, and constipation. Therefore, the doctor has come to the conclusion that this is a unusual case of Takayasu arteritis with trigeminal neuralgia. The patient has been diagnosed medically and is being treatment is provided accordingly.

KEYWORDS: Takayasu arteritis, vasculitis, carotidynia, Trigeminal neuralgia.

INTRODUCTION

A large-vessel vasculitis called Takayasu arteritis mostly affects the aorta and its branches. It primarily affects young females in their second and third decades of life, with a female: male ratio of 3 to 1. Southeast Asia has the highest incidence of it. According to BMJ Journals of Annal of Rheumatic disease in the United States of America, 2 to 3 cases per million people are thought to occur annually. In the US, there were 216 patients in the largest case series.[1] The large vessel vasculitis's affect the aorta and its branches and include giant cell arteritis and Takayasu arteritis, which are anatomically, epidemiologically, and clinically distinct conditions.[2] There are various stages to the illness. The artery wall first experiences an inflammatory phase, which is followed by stenosis, blockage, and, in some circumstances, progression to aneurysmal degeneration. Claudication symptoms and indications of ischemia, pulselessness, and hypertension are present in the advanced stages which is one of the of the illness. One of the most difficult obstacles. The absence of a connection between disease activity and inflammatory indicators is problematic for the diagnosis and follow-up. Glucocorticoids are the usual course of treatment; supplemental immunosuppressive drugs are occasionally required.[3] Mikito Takayasu, an ophthalmology professor at Kanazawa University in Japan, presented the first scientific study on this condition at the 12th Annual Meeting of the Japanese Ophthalmology Society in 1905. He gave the example of a 21-year-old woman with an unusual coronary anastomosis in her optic fundi.[4] There are typically three distinct phases of TAK. There are constitutional inflammatory signs in the initial stage. TAK may even show up as a fever with no recognized cause during this stage. The second phase begins with mural inflammation in the major arteries, which results in carotidynia—neck pain—and, occasionally, extra thoracal and dorsal discomfort. The third phase is the late phase, which is characterized by intermittent extremity claudication, arterial bruits, diminished or absent pulses, and/or variations in arterial blood pressure between the upper extremities.[5] The number of new cases of classic trigeminal neuralgia is -4.5 per 100 000. It is defined by recurrent attacks of severe, lancinating pain that is restricted to a few small locations of the face.[6] To the best of our knowledge, no reports have identified trigeminal neuralgia with Takayasu arteritis.

CASE REPORT

A 59 years old female patient was admitted to the general medicine ward with the chief complaints of generalized weakness with numbness and tingling sensation over the left face, arm, or leg and blue colour discolouration over hands or fingertips when exposed to cold for

2-3 years and patient also had complaint of constipation. The history of her present illness was as her symptoms were gradually progressive in nature for the last 15-20 days. Patient had history of paralysis attacks 10-12 years back. She has also complained about sleep deprivation and a lack of appetite. She smoked continuously for the previous 20 years before quitting 2 years ago. No similar complaints are seen in the family history. Laboratory investigation of hematology report shows hemoglobin(11.1g/dl), Neutrophils(37.1%), Lymphocytes(47%), TRBC(3.79 millions/cumm), PCV(33.3%). As per the lipid profile, Direct LDL cholesterol was high (188.7mg/dl) and VLDL slightly elevated (33.39 mg/dl). In the radiological investigation, CT angiography of the aorta great vessels and upper limbs showed diffuse intimal thickening with atherosclerotic calcification of the ascending aorta, arch of the aorta, and descending thoracic aorta noted. There is evidence of atherosclerotic calcification and >50% narrowing of the ostioproximal segment of the Innominate artery, left common carotid artery noted. There is complete occlusion of the ostioproximal segment of the left subclavian artery. There is the collateral reformation of the left subclavian through the left internal mammary artery and bronchial artery. The left common carotid and left vertebral arteries are small in caliber. There is evidence of an eccentric soft plaque in the ostioproximal segment of the right subclavian artery and angiography of the abdominal aorta and bilateral lower limb shows evidence of 80% narrowing of the distal left common iliac artery. complete occlusion of the ostioproximal segment of the left internal iliac artery was noted(Fig.1), based on history examination and investigation diagnosis of Takayasu arteritis with the atherosclerotic disease with trigeminal neuralgia was made. The patient was treated under the expert guidance of a physician and medicines were prescribed as Injection Voveran (1 amp) was prescribed for pain and swelling, and Tablet Atorvastatin(40mg) was prescribed because of elevation of LDL. Discharge medications, including Tablet Carbamazepine, was prescribed for trigeminal neuralgia as it is the drug of choice for the same, Tablet Ecosprin was prescribed to dissolve clot by its antiplatelet activity and to prevent any further complications like a heart attack or stroke.

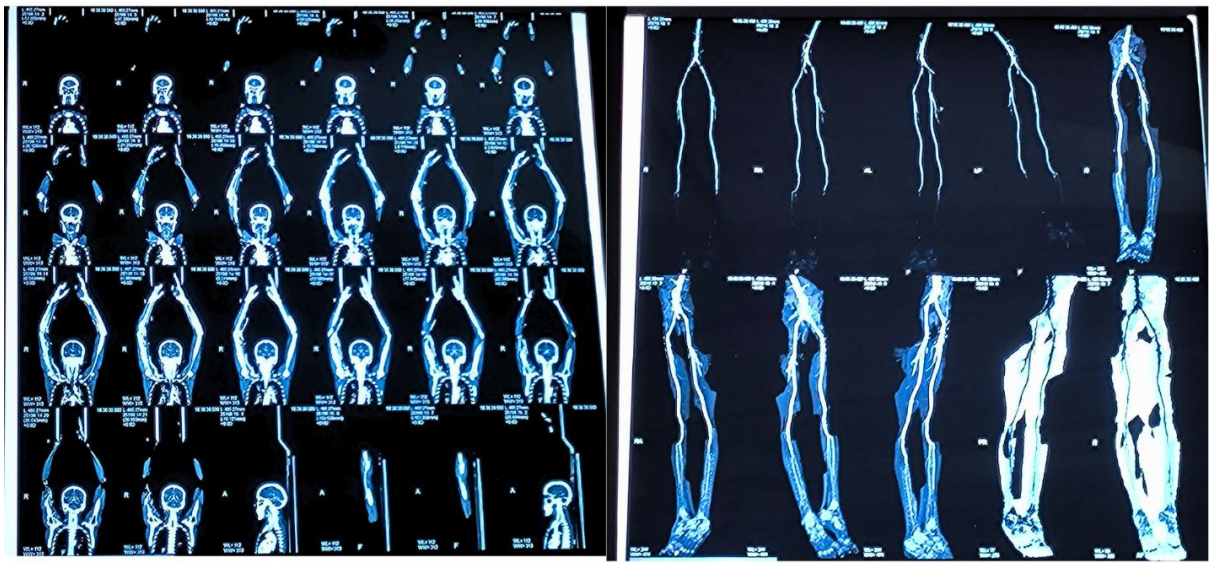

Fig 1: Angiography showing evidence of a short segment atherosclerotic calcification noted in the proximal segment of the left anterior tibial artery and there is atherosclerotic calcification with narrowing of the ostiproximal segment of the right common carotid artery.

DISCUSSION

Takayasu arteritis (TA) is an uncommon kind of primary chronic inflammatory illness that damages the arteries by generating stenosis, occlusion, and aneurysms. More than 90% of individuals with TA are under 40, have a female preponderance (female to male ratio is 10:1), and are Asians. TA mostly affects large-caliber arteries like the aorta and its major branches in people under 40.[7] There is a significant variation worldwide, with 9:1 in Japan, 6:1 in Korea, 3:1 in China, 3:1 in Iran, 5:1 in France, 5:1 in Brazil, and 3:1 in Colombia, according to recent data from Turkey and North Europe. With ratios of 1.6:1 in India and 1.8:1 in Israel, there is a less significant female predominance in a number of other populations. Female-to-male ratios of 12:1 and 11:1 are both high. Most of the early research done in various populations around have consistently indicated female predominance.[8] In addition to influencing TAK frequency, ethnicity also significantly impacts the severity and prognosis of the condition. Although a national registry for Japan showed that there were at least 5881 TAK patients there in 2011 with a prevalence of more than 4/million.[9] Trigeminal neuralgia is classified as either classical or symptomatic in the International Classification of Headache Disorders (ICHD) -II by the International Headache Society. Traditional pain is present in classic trigeminal neuralgia symptoms that are either due to neurovascular compression or have no recognized cause. Structural lesions like meningioma, schwannoma, or other tumors

are what cause symptomatic trigeminal neuralgia. structural lesions are the second most frequent cause of trigeminal neuralgia, occurring in 72.0–90.8% of cases (5.1-10.7 percent). The cause is not known. The ICHD-II defines classical trigeminal neuralgia as pain that is abrupt and lasts between one and two minutes at a time. There are three or more points in the trigeminal nerve's innervation zone, the pain is sharp, stabbing, and of extreme intensity, it starts from a trigger point or is brought on by a trigger factor, it manifests differently in each person, and it doesn't necessarily indicate clinical neurological deficits. On the other hand, paresthesia around the trigeminal nerve area is a sign of symptomatic trigeminal neuralgia. According to studies, neurological symptoms in more than half of TA patients might vary from headaches and vertigo to ischemic stroke.[10]

Traditional trigeminal neuralgia is brought on by cerebral vascular compression of the root entry zone, where the myelin sheath shifts from central to peripheral at the cerebellopontine angle. Constant neurovascular compression can result because the root entry zone is susceptible to mechanical compression demyelination. As a result, pain is caused by the trigeminal nerve's action potentials sending the wrong signals to the distal pain nerves.[11] A 59 years old female patient was admitted to the general medicine ward with the chief complaints of generalized weakness with numbness and tingling sensation over the left face, arm, or leg and blue color discoloration over hands or fingertips when exposed to cold for 2-3 years and patient also had complaint of constipation. The patient got treated under the expert guidance of a physician, nursing staff, and clinical pharmacists. Her caregivers were counseled properly to take care of her and follow the instruction given by healthcare professionals.

CONCLUSION

In this case report we discussed a rare case of Takayasu arteritis and trigeminal neuralgia, our study reports that her symptoms got relieved after taking the proper medication prescribed by the physician. Angiography can be a helpful diagnostic tool in detecting the condition. Early treatment is indicated for any further complications.

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