An Unusual Association of Takayasu Arteritis with Inflammatory Bowel Disease - A Rare Case Report

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Abstract- The coexistence of Takayasu's arteritis and Ulcerative colitis is very rare, though not unknown. Here we present a case report of a patient presenting with complaints related to the gastrointestinal system who on examination appeared "pulseless"in both upper limbs.

Index Terms- Takayasu's arteritis, ulcerative colitis, association between Takayasu arteritis (TA) and Ulcerative colitis(UC).

I. INTRODUCTION

Takayasu arteritis is an inflammatory and stenotic disease of medium and large sized arteries commonly leading to pulseless states hence the word "pulse less disease". It is an uncommon disease with annual incidence of 1.2-2.6 cases per million and common among young and adolescent women. This disease is characterized pathologically by intimal proliferation, fibrosis, scarring and vascularisation of the media and disruption and degeneration of elastic lamina which leads to luminal compromise of affected vessels and henceforth their perfusion. The most commonly involved major vessel is the subclavian artery causing arm claudication and raynauds phenomenon, commonly diagnosed on angiography and histopathological examination.

Ulcerative colitis is a chronic idiopathic inflammatory disorder diagnosed by characteristic clinical, endoscopic and histologic features. It has bimodal age distribution with peak age of onset between 20-40years, and second peak beyond 7th decade with equal sex distribution.It is pathologically characterized by granular,hyperemic and edematous mucosa often ulcerating to its mucosal extent and leaving out pseudopolyps. It starts in the rectum and extends proximally in a continuous pattern but it affects only the colon. It is clinically characterized by hematochezia, diarrhea, tenesmus, passage of mucus, urgency to defecate and abdominal pain. Suspicion of the same can be confirmed using radiography, histopathology and serologic markers apart from a classic clinical history.

Both the above conditions are individually rare. Furthermore patients presenting with both are seldom written about in literature. Hence we take the opportunity to present this case report to highlight the possiblility of a pathophysiological association and to keep a high degree of suspicion for ulcerative colitis in a patient presenting with occlusive arterial disease.

II. CASE REPORT

A 37yrs old female presented to the department of General medicine with chief complaints of abdominal pain, diarrhea (15 to 20 episodes per day) hematochezia and weight loss since two months. She was treated with routine anti diarrheals', but the symptoms seemed to worsen. On probing her past medical history she was diagnosed to have occlusive disease of her upper limbs as the treating physician could not feel the upper limb pulses.

On examination the patient was thin, emaciated, malnourished and showed pallor, but no icterus,cyanosis, clubbing,lymphadenopathy and edema. She was afebrile, with normal bilateral air entry and heart sounds with grade II early diastolic murmur and carotid bruit.However the patients pulses and blood pressure were not recordable in the upper limbs (radial,brachial and axillary- pulses not felt). Both the lower limbs showed normal blood pressure i.e. 120mm Hg systolic and pulse rate of 80bpm(at dorsalis pedis and posterior tibial artery).Her abdomen was scaphoid with no organomegaly but diffuse mild tenderness and normal bowel sounds. Bruit were noted in both lumbar regions. There were no neurological deficits.Rest of the systems examined were unremarkable.

Hematological investigations showed normocytic,hypochromic anemia with leucocytosis and adequate platelets.ESR was raised. Complete urine examination was normal. Renal function tests,Serum Electrolytes were unremarkable. Serum albumin was decreased(3g/dl).The Patient was non reactive for HIV,HBsAg. C reactive protein was raised. PT,INR,APTT and other procoagulant markers like protein C,S, Antithrombin III, APLA- IgG, IgM were within normal limits.Thyroid function tests were within normal limits.pANCA,c ANCA, ANA, anti ds DNA were negative.
ECG and CHEST X RAY were normal.

2D ECHO showed normal sized chambers with dilated ascending aorta and thickened aortic valve. Mild aortic regurgitation.Good Left Ventricular,Right Ventricular function.

Radiological investigations included the following:

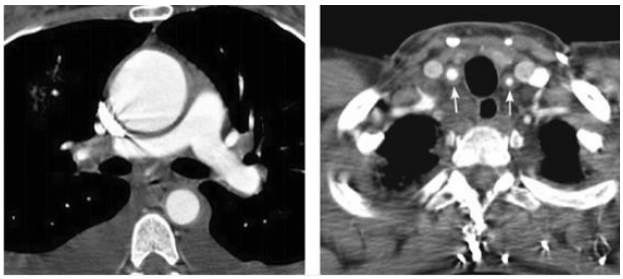
1) Ultrasound abdomen showed colonic wall thickening (10mm)in its entire extent with subtle ileal wall thickening (3.5mm).Small bowel loops appeared prominent and fluid filled.Solid organs revealed no significant point of note.

2)Doppler of upper limb arterial system: Thrombosis of both right and left axillary arteries with concentric arterial wall thickening.

3)Carotid Doppler revealed concentric wall thickening in both common carotid arteries with no obvious atheromatous calcific areas. Turbulent flow was evident, however no stenotic areas from common carotid to the internal carotid tree on both sides

4) Renal Doppler:Unremarkable.

5)CT arch aortogram: Confirmed the Doppler findings and a possibility of takayasu's arteritis was raised.



CT ANGIOGRAM IMAGES
Fig1.Dilated aorta with subtle wall thickening.
Fig 2.Concentric wall thickening in both common carotids.

Colonoscopy shows mucosal friability with loss of vascular pattern , tiny multiple ulcerations and whitish exudates all over the colon. Biopsy from rectosigmoid region revealed features suggestive of ulcerative colitis.

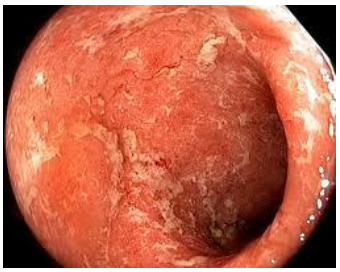


Fig 3.colonoscopy image of the patient.

III. DISCUSSION

Inflammatory bowel disease has been reported with spondyloarthropathies, Sjögren's syndrome, rheumatoid arthritis, inflammatory myopathy and TA.TA and UC are chronic inflammatory diseases of unknown etiology, and their coexistence is very rare. The occurrence of the two together is possibly related to a common pathophysiology involving alteration in the immune mechanisms. In patients with both TA and UC, there is a high frequency of HLA-A24, B52 and DR 2.

TA is more prevalent in Japan and Southeast Asia, whereas UC is more common in Western countries. The disorders may begin simultaneously or have a delay of several years. TA may develop after total proctocolectomy for UC.

The presentation of TA may differ and varies from constitutional symptoms to cerebral or cardiac manifestations. Abdominal pain, diarrhea, and gastrointestinal hemorrhage may result from mesenteric artery ischemia. The presence of constitutional symptoms such as fever, malaise,weight loss, myalgia and ischemic symptoms or signs of one or more large arterial stenoses should raise a suspicion for TA when these features occur in someone under the age of 40 years.

It is recommended to consider a diagnosis of UC in conjunction with TA in any young patient with TA who suffers from diarrhea, abdominal pain and hematochezia. In TA patients, however,there may be a presentation of rectal bleeding and inflammatory colitis due to UC. Full management of these two serious disorders is important because of their potential complications. As the number of cases of UC associated with TA increases, it will be necessary to evaluate their genetic background and possible environmental factors.

IV. CONCLUSION

A high degree of suspicion should be maintained in a patient of Takayasu's arteritis who presents with diarrhea, abdominal pain and hematochezia as the patient could be suffering from Ulcerative colitis as well. Therefore the investigations in Takayasu's arteritis should include those of ulcerative colitis such as serological investigations, colonoscopy and biopsy. Instead of presumptive treatment with antidiarrheal medications, antibiotics for prolonged periods in a patient with diarrheal symptoms in Takayasu arteritis, it would do us good to exclude the possibility of ulcerative colitis, as the treatment line would differ for both.

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