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Case Report

May-Thurner Syndrome: Report of Case of Unique Presentation in Pregnancy that Indicate Delivery

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Abstract

This case report of relatively rare syndrome with common presentation during pregnancy. The value of this case came from dealing with uncommon risk factor of thromboembolism/deep vein thrombosis (DVT) which is a leading cause of maternal mortality and morbidity worldwide.

The early and continuous involvement of multidisciplinary teams as well as early planned delivery improve the disease outcome dramatically.

Keywords: *Vascular Diseases; Deep Vein Thrombosis (DVT); May Thurner Syndrome; Pregnancy*

Introduction

May-Thurner syndrome (MTS)

Is defined as extrinsic venous compression by the arterial system against bony structures in the iliocaval territory [1]. In approximately 22 percent of 430 cadavers, May and Thurner noted intraluminal thickening ("venous spurs"), which appeared to be directly and most commonly related to external compression of the left common iliac vein by the right common iliac artery against the fifth lumbar vertebra [2,3]. There are three histologic types of spurs: central, lateral, and fenestrated. The relationship between iliac vein compression and post-thrombotic syndrome was later illustrated by Cockett in 1967 [4]. The condition can be asymptomatic but progression with symptoms related to chronic venous hypertension or venous occlusion can occur, with or without venous thrombosis [5-7].

Prevalence of MTS are unknown but are likely underestimated given that most individuals with MTS anatomy do not have symptoms and require no treatment [10-13].

Risk factors

Risk factors for MTS are listed below [8,11]. These may be directly associated with MTS or may increase the likelihood that asymptomatic MTS will progress to symptomatic MTS:

- Female gender, particularly those who are postpartum, multiparous, or using oral contraceptives
- Scoliosis may predispose to MTS due to compression from the lower lumbar vertebra
- Dehydration

- Hypercoagulable disorders
- Cumulative radiation exposure.

The approach to diagnosis and treatment depends upon whether venous thrombosis is present. When the diagnosis is highly suspected based upon clinical features or non-invasive vascular imaging, a definitive diagnosis is established using intravascular ultrasound. Minimally invasive treatment (angioplasty and stenting) of the venous lesion relieves outflow obstruction and provides immediate relief of symptoms with good long-term patency rates.

Case Scenario

Thirty-six years old woman in her first pregnancy which was twins pregnancy as a result of *invitro* fertilization for male factor, was presented to WWRC emergency department with bilateral lower limb sever pain and swelling more marked in the left lower limb, at 32 weeks of gestation, deep vein thrombosis was excluded by color doppler US, was started on therapeutic dose of enoxaparin based on clinical suspicion. Patient develop unexplained right upper limb weakness on second day of admission MRI spine showed nothing apart from mild scoliosis. Patient was evaluated by neurologist, vascular surgeon, hematologist in addition to the obstetrician as primary team. diagnosis of mts was made based on clinical presentation and doppler ultrasound. Condition was not responding to supportive measures in term of lower limb edema and tenderness. Case was discussed in team meeting and decision was made to deliver patient by cs at 35 weeks+ 6 days on 07/10/2019, delivered 2 boys weight 2.71 kg and 2.72 kg, with around 3 liters of liquor, intra operative course was uneventful, patient showed marked improvement on first post operative day in term of edema and tenderness. Discharged from hospital in good condition after 3 days. Patient was given follow up with vascular surgery team for possible need for angioplasty/stenting.

Learning Points and Recommendation

In this case possible aggravating factors are the twins and polyhydramnios by increasing the pressure from the gravid uterus over the iliocaval vessels.

All pregnant patients who present with clinical features of possible thromboembolism should be thoroughly looked at for the confirmation of the diagnosis as this is the recommendation by all international guidelines. Whenever the DVT was excluded with persistence of symptoms, clinicians would think of other causes of vascular diseases such as M-T syndrome.

More case presentations and researches are needed to increase awareness and knowledge about these diseases.

Conclusion

In spite of the rarity of the condition, high index of clinical suspicion and utilization of resources aid at reaching the diagnosis. Multidisciplinary involvement and detailed discussion of the case assist at optimum management for the patient and fortunately with good outcome. The learning lesson from this case is to think about wide variety of diagnosis specially in tertiary level setting where resources are available for proper management.

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