

## Massive Clot Aorta, With Emboli To Mesenteric And Femoral Vessels - A Case Report

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### SUMMARY

Arterial thrombo-embolic episodes are not clinical rarity. Most commonly, these are emboli from heart and occur in association with mitral valve disease, acute myocardial infarction, dilated cardiomyopathy, severe congestive heart failure or infective endocarditis. Primary, in-situ arterial thrombosis, is, however relatively rare and has been reported in arteritidies, vascular procedures like IABP and renal Angioplasty, hemodialysis, malignancies, arterial injuries, hypercoagulable states, after cardiac surgery, certain hematological conditions (PNH, Protein C & S Deficiency states), and after umbilical artery cannulation in neonates. We are describing an unusual presentation of a case of aortic thrombus of unknown etiology.

### Case Report

A young man of 42 years reported in emergency reception of AFIC/NIHD with sudden pain in the left leg of 12 hours duration. He was a known hypertensive, and on regular treatment. Apart from hypertension has had never sought medical advice for any other problem. His history gave no clue as to the etiology of his present symptoms. He was restless and on examination, it was found that he had absent femoral pulse on left, but normal pulsations on right side, with cold and clammy left lower limb. Rest of physical examination was unremarkable. His transthoracic echocardiography did not reveal any clot in left or right sided chambers and his valves were normal. Because of history and physical examination, a clinical diagnosis of left femoral embolism was made. Left femoral artery was exposed and was found collapsed with no visible pulsation. Fogarty Catheter of appropriate size was passed up and down. A small clot was removed. Bleeding started from up and down but it was not a full flow. Femoral arteriotomy was closed. The pulsation was not good initially but gradually it came up. The question was why the pulsations were not good. The patient was immediately rushed to the cath lab for aortography.

Aortography showed a big clot in the aorta at the level of diaphragm, which was almost obstructing the whole flow of the aorta. Anticoagulants were started and patient shifted to Ward. Patient started having severe

pain in the abdomen with gradual rigidity. Plain X-ray abdomen showed hyper-segmented colonic shadow. With a diagnosis of mesenteric ischemia, he was shifted to under care of general surgeon who did laparotomy and it was found that nearly the whole mid gut was gangrenous and was resected. His postoperative course was very rough and he died due to Hypovolemia and septicemia. Meanwhile, all routine and directed investigations were carried out but none provided clue to the underlying etiology of arterial thrombosis.

### Discussion:

Acute arterial occlusions are commonly encountered in cardiovascular referral centers. Presenting with signs of ischemia of organ supplied, diagnosis is seldom a mystery and no elaborate diagnostic work-up is required in most cases<sup>1</sup>. In majority of the cases, the etiology of occlusion is embolic in nature. Heart is the most common source of such emboli. Mural thrombi from dilated, dyskinetic chambers and vegetations from infected valves constitute the majority. In-situ thrombosis of major arterial vessels is encountered only rarely, and is seldom considered in primary differential diagnosis, unless patient is already known to be suffering from the predisposing condition.

Our patient was a young man in early forties, in good health, and a known hypertensive. His blood pressure was adequately controlled on medication. He had no history of previous embolic episodes, and any

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cardiac or extra-cardiac predisposing condition. His clinical condition was typically suggestive of aortofemoral embolism involving left leg. His duration of symptoms was more than 12 hours at the time of presentation. Urgent transthoracic echocardiography revealed a normal heart with no evidence of intra-mural thrombi. In view of this, embolectomy was performed without prior angiogram. However, after sub-optimal results, aortography was resorted to which disclosed a large aortic thrombus. The patient was started on heparin infusion, and laboratory work-up started to find out the cause of thrombosis. However, the patient started having abdominal pain suggestive of mesenteric occlusion. Urgent laparotomy was done, mesenteric thrombosis confirmed and gangrenous gut resected. However the patient did not survive.

Mesenteric occlusion and subsequent gangrene is usually fatal unless prompt surgical intervention is undertaken<sup>2</sup>. A mortality rate of 72% has been reported<sup>3</sup>. Even in case of seemingly successful embolectomy, the Prognosis is guarded<sup>4</sup>. Occasional anecdotal reports of successful embolectomy with patient survival are reported<sup>5</sup>. Fibrinolytic therapy with streptokinase has been reported to be successful in dissolving the clot on rare occasions<sup>6</sup>.

The diagnosis of aorto-femoral embolism is largely clinical. Although angiography is considered the gold standard, the facility is available to a limited number of patients only. A non-invasive technique for detecting aorto-femoral emboli has been described, using high frequency ultrasound transducer<sup>7</sup>. However, urgency of situation usually precludes sophisticated diagnostic measures and surgical embolectomy is performed on clinical grounds alone.

The diagnosis of mesenteric occlusion, however, is not so straightforward. A wide range of acute abdominal conditions present with similar clinical picture. If a condition predisposing to embolism is not known to exist in the patient, mesenteric ischemia/infarction is rarely considered, nor any directed investigations carried out for ruling it out. Other than arteriography and CT scan/MRI, no other routinely available investigation can detect it with reasonable degree of accuracy<sup>8</sup>. One report has pointed out that diagnostic value of serum lactate and found out that lactate levels may be high in mesenteric infarction but normal in other acute abdominal condition<sup>9</sup>. Another chemical marker, intestinal fatty acid binding protein (I-FABP) has been found to be having highly specific for intestinal necrosis<sup>10</sup>.

### Conclusion:

Aortic thrombosis may occasionally present

initially with unilateral loss of pulsations in one leg initially with unilateral loss of pulsations in one leg without other signs of organ ischemia. It can be mistaken as aorto-femoral embolism based on available clinical data and direct resort to embolectomy made without extensive investigations. The approach, though justifiable in our clinical circumstances, may occasionally lead to misdiagnosis. Atypical presentation, absence of source of embolism and abdominal symptoms should alert the clinician to other possibilities. High index of suspicion, urgent work-up using available investigations and early therapeutic intervention are crucial to the management.

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