INTRODUCTION
An arteriovenous (AV) fistula is an abnormal communication between an artery and vein. Penetrating trauma is the common cause of traumatic AV fistula, followed by iatrogenic injuries and blunt trauma. Low velocity small fragments penetrating injuries in close proximity to main vessels usually cause partial injuries to the vessel walls. These injuries are usually missed at the time of initial trauma due to absence of hard signs of vascular injury and later on present as traumatic AV fistulas or pseudoaneurysm. The clinical manifestations of traumatic AV fistula are variable and depend upon the location, size and duration of fistula. Local and systemic physiological effects of a traumatic AV fistula include swelling of the affected limb, secondary varicose veins and heart failure, usually occurring late. As a consequence, its diagnosis may be delayed for many years. Diagnosis of traumatic AV fistula is usually suggestive on history and clinical examination, but conventional arteriogram or CT angiography is required for confirmation and planning of surgical intervention.

CASE REPORT
A 48 years old male reported in a surgical outpatient department of a peripheral hospital with haematuria. He was admitted for investigation and management. During investigations, ultrasound of abdomen and pelvis revealed a vascular mass in the left side of urinary bladder. CT angiography showed communication between left superficial femoral artery and vein and gross dilatation of thigh and pelvic veins with mass effect on the urinary bladder. He was operated upon in the same hospital. Exploration revealed large aneurysm of the left external iliac vein and gross dilatation of common iliac, external iliac and common femoral arteries. Incision was closed without any intervention.

Patient had reported in our Hospital in January 2011 with the impression of an abdominal mass with impending rupture. He was admitted and detailed history was taken which revealed that he had through and through gunshot injury in his left thigh in 1986 which was managed in a local hospital by wound debridement and antisepctic dressing. No peripheral vascular injury was detected at that time. He remained symptoms-free for 25 years except for mild leg swelling on prolonged standing and dilatation of superficial leg veins. On examination, he had palpable thrill and machinery murmur in his left thigh and groin. There were small scars of entry and exit wound on the medial and lateral side of left lower thigh.

ABSTRACT
A case of post-traumatic arteriovenous fistula in the left thigh is reported 25 years after injury with haematuria. The patient had sustained bullet injury in his left thigh in 1986. Clinically, he had thrill and bruit in his left thigh and groin. Ultrasound abdomen and pelvis revealed a vascular mass in the left side of urinary bladder. CT angiography showed communication between left superficial femoral artery and vein and gross dilatation of thigh and pelvic veins with mass effect on the urinary bladder. He was managed by excision of fistula and repair of both artery and vein with interposition of a prosthetic graft.

Key words: Traumatic arteriovenous fistula. Vascular injuries. Secondary varicose veins. Haematuria.
months follow-up the patient had good distal pulses and the superficial varicosities and leg swelling had disappeared.

**DISCUSSION**

Low velocity penetrating injuries in close proximity to an artery and vein are the most common cause of traumatic AV fistulas. Iatrogenic AV fistulas following catheterization of femoral or brachial arteries for diagnostic and therapeutic endovascular procedures are frequently reported now-a-days. Extremities are more frequently affected sites of traumatic AV fistulas, followed by head and neck in most published series.4 Abdominal and thoracic vessels are rarely involved. Physiological effects of an AV fistula occur due to shunting of arterial blood into venous system. It causes swelling, superficial varicosities and in long standing cases signs of venous stasis including pigmentation, indurations and ulceration may be present.5,6 Shunting of arterial blood through direct communication increases the cardiac work load and in chronic cases leads to heart failure.7 Long standing peripheral AV fistulas are usually accompanied by ectasia of proximal arteries as was in this case. Iliac and even infra-renal aortic aneurysms associated with traumatic AV fistula have been reported. Like this patient, a few cases of external iliac vein aneurysm with traumatic AV fistula of thigh have been reported in literature.8

The diagnosis of traumatic AV fistula is frequently evident clinically. History of penetrating injuries, presence of a pulsatile mass with thrill and machinery murmur and positive Branham signs (reduction in resting pulse rate on compression of fistula and proximal artery) are suggestive of AV fistula. Doppler study, CT angiography, magnetic resonance imaging (MRA) and conventional arteriography are the investigations required to confirm the diagnosis and for planning surgical intervention of AV fistula. A Doppler study shows an increased velocity in the proximal artery and pulsatile flow pattern in the proximal veins. CT angiography provides anatomical information regarding the size and location of AV fistula and involvement of adjacent structures.9 The preferred treatment of a traumatic AV fistula is surgical correction. It includes the excision of fistula and to restore the continuity of the involved artery and vein with interposition reverse autogenous vein graft or prosthetic graft. When a fistula arises from a non-essential artery, proximal and distal ligation of involved artery is sufficient. Recent developments in endovascular techniques have provided significant and effective alternatives to open surgical treatment. Metallic coils and covered stents have been used frequently for endovascular treatment of AV fistulas.10

To the best of authors’ knowledge, this is a unique case with such a latest presentation reported with systemic symptoms for a primary peripheral lesion.
REFERENCES


