SUMMARY

- Vascular trauma can result from either blunt or penetrating injury
- Pattern of injury differs according to the mechanism of injury
- Blunt vascular trauma is associated with an increased amputation rate
- Results from blunt injury being associated with significant fractures and tissue loss
- The diagnosis of blunt vascular trauma is often delayed. **(Gupta et al., 2001)**.

Types of vascular injury:

- Contusion
- Puncture
- Laceration
- Transection **(Nigel et al.,2005)**

Clinical Features

- Depends on site, mechanism and extent of injury
- Signs classically divided into 'hard' and 'soft' sign

Hard signs of vascular injury:

- Absent pulses
- Bruit or palpable thrill
- Active haemorrhage
- Expanding haematoma
- Distal ischaemia

Soft Signs of Vascular Injury:

- Haematoma
- History of haemorrhage at seen of accident
- Unexplained hypotension
- Peripheral nerve deficit

(Conrad MF et al.,2002)

Investigation:

- Hard signs often require urgent surgical exploration without prior investigation
- Arteriography should be considered:
  - To confirm extent of injury in stable patient with equivocal signs
  - To exclude injury in patient without hard signs but strong suspicion of vascular injury
- The role of color-flow duplex ultrasound in vascular trauma remains to be important , nearly all major injuries that require therapeutic intervention can be identified . **(Cronenwett, et al.,2010).**

Management:

- Often requires a multidisciplinary approach with orthopaedic and plastic surgeons
- Aims of surgery are to:
  - Control life-threatening haemorrhage
  - Prevent limb ischaemia
- If surgery is delayed more than 6 hours revascularisation is unlikely to be successful (**Theodore et al., 2005).**

Vascular repair:

- Usually performed after gaining proximal control and wound debridement
- Options include :
  - Simple suture of puncture hole or laceration
  - Vein patch angioplasty
  - Resection and end-to-end anastomosis
  - Interpositional graft

- Contralateral saphenous vein is the ideal interpositional graft, Prosthetic graft material may be used if poor vein or bilateral limb trauma. **(Valentine RJ ,et al.,2003)**

The continued advances in imaging and stent-graft (SG) technology have considerably expanded the indications for endovascular approach in vascular trauma, with the potential advantage of avoiding part of the challenging problems of conventional repair. **(Shah SH et al.,2003)**