Endovascular repair of iliac vein laceration associated with complex pelvic fracture

Dr. Vicente Mosquera Rey
Department of Angiology and Vascular Surgery
Hospital Universitario Central de Asturias (HUCA)
Oviedo, Asturias, Spain
INTRODUCTION

• Iliac vein injury (IVI):
  • Uncommon (<0.7% vascular trauma).
  • Life-threatening condition (25-80% mortality).

• IVI associated to complex pelvic fracture:
  • High intensity pelvic trauma.
  • Hemodynamic instability.
INTRODUCTION

- Iliac vessel injuries w/blunt trauma:
  - Pelvic fracture in 82.7% of cases.

- Emergency management.

- Optimum treatment and diagnosis strategy:
  - No consensus.
CASE DESCRIPTION

- 15-year-old obese male.
- Severe polytrauma (motorcycle accident).
- Glasgow coma scale score of 6.
- Hemodynamically instable: 41/25 mmHg BP, 150 bpm.
- Hemoglobin level of 7.5 g/dl.
CASE DESCRIPTION

- Endovenous contrast enhanced full body CT.
- Laceration of the left external iliac vein with active bleeding and retroperitoneal hematoma.
CASE DESCRIPTION

- DUS guided percutaneous access of both common femoral veins.
- Phlebography.
- 13x100 mm Viabahn®.
- Pelvic fracture fixed.
• 12 month follow-up: asymptomatic and stent patency confirmed.
DISCUSSION

• **Time** is a key factor for survival.
• Difficult to diagnose.
• No consensus about the best therapeutic strategy.
• Effective bleeding control takes preference over fracture fixation.
• Open repair
  ❖ Laparotomy reduces the tamponade effect.
  ❖ Complex vessel exposure (iatrogenic injury).
  ❖ Thromboembolic complications.

• Endovascular repair
  ❖ Immediate sealing while keeping the retroperitoneal tamponade effect.
  ❖ Viabahn®: flexible and adaptable.
CONCLUSION

Self-expanding covered stent graft placement can be an effective and rapid treatment for life-threatening iliac vein injury.
... thank you.

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