

1. A brief history of vascular injury – training, diagnosis and management

- a. *Trauma – David Feliciano, University of Maryland*
- b. *Vascular / Endovascular – Joe DuBose, University of Maryland*

2. Contemporary diagnosis of vascular injury

- a. *Vascular / Trauma – David Kauvar – Brooke Army Medical Center*
- b. *Zach Authors – SAMMC Vascular*

i. Specifics

- 1. Physical exam (Hard / Soft signs, ABI)
- 2. CTA (sensitivity / specificity / limitations)
- 3. Traditional angiography
- 4. Ultrasound (Duplex / IVUS)
- 5. MRA

3. General Open Vascular Repair for Trauma – Principles, Tools and Techniques

- a. *Trauma – Elizabeth Benjamin – Emory University*
- b. *Vascular – Ravi Rajani – Emory University*

i. Specifics of Techniques

- 1. Basic principles of open vascular operations
- 2. Basic tools
 - a. Clamps
 - b. Fogarty thrombectomy catheters (selection)
 - c. Suture selection
 - d. Pledget reinforcement
- 3. Selection for and conduct of specific techniques
 - a. Primary repair
 - b. Patch angioplasty
 - c. rSVG interposition
 - d. Synthetic interposition

4. Basics of Endovascular Trauma Management

- a. *Trauma / Vascular – Megan Brenner - Riverside*
- b. *Endovascular – Yosuke Mastumura / Junichi – Chiba University Hospital, Japan*
- c. *Vascular – Derek Roberts – Ontario Canada*

- i. Techniques for access
 1. Anatomic landmarks at various sites
 2. Ultrasound techniques
 3. Fluoroscopy guided
 - ii. Sheath types
 - iii. Wire Options
 - iv. Catheter Options
 - v. Access site closure
 1. Manual compression
 2. Percutaneous closure devices
 3. Open closure techniques
- 5. Endovascular Tools and Techniques for Trauma Applications**
 - a. Trauma / Vascular – Jonny Morrison – University of Maryland
 - b. Vascular / Vascular – Rishi Kundi – University of Maryland
 - i. Occlusive Balloons
 1. REBOA
 - ii. Embolic agents and devices
 - iii. Stents and stent grafts
 - iv. Basic inventory table
- 6. Vascular Damage Control**
 - a. *Trauma – Matt Bradley – Walter Reed Medical Center*
 - b. *Vascular – Joe White – Walter Reed Medical Center*
 - c. *Vascular – Todd Rasmussen – Walter Reed Medical Center*
 - i. Specifics
 1. Principles – When? Why? – in what situations
 2. What? – Open (ligation / shunt) and Endovascular (Balloon occlusion / embolization / temporary stent graft)
 - a. Shunt types
 3. How? - technique description for above

SPECIFIC VASCULAR INJURIES – Section Editor – Joe DuBose

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7. Cervical Vascular Injury

- a. *Trauma – Eugene Moore / Clay Burlew – Denver General Hospital*
- b. *Vascular – Melanie Hoehn – Denver General*

8. Upper extremity injury (Brachial, radial, ulnar)

- a. *Trauma – Mark Bowyer, USUHS*
- b. *Vascular / Trauma – Sundeep Gilani, University of New Mexico*

9. Axillo-Subclavian Injuries

- a. *Trauma – Tom Scalea – University of Maryland*
 - i. *Richard Betzold, MD – University of Maryland*
- b. *Vascular – Joe DuBose, MD – University of Maryland*
 - i. *Anna Romagnoli, MD – Massachusetts General Hospital*

10. Thoracic Arch and Proximal Great Vessels

- a. *Trauma / Cardiothoracic – Jim O’Connor – University of Maryland*
- b. *Vascular / Endovascular – KJ Nagarsheth – University of Maryland*

11. Descending Thoracic Aortic Injury

- a. *Trauma – Demetrios Demetriades – USC / LA County*
- b. *Vascular – Greg Magee, MD*

12. Abdominal Aortic and Iliac artery injuries

- a. *Trauma – Rob Todd – Emory University*
- b. *Vascular – Christopher Ramos – Emory University*

13. Mesenteric and Renal artery injuries

- a. *Trauma – Dave Feliciano, University of Maryland*
- b. *Vascular – Mike Hall, University of Maryland*

14. Femoropopliteal artery injuries

- a. *Trauma – Matt Martin*
- b. *Vascular / Trauma – Mike Sise*

15. Arterial injuries below the knee

- a. *Trauma – Chad Wilson, Baylor*
- b. *Vascular – Joseph Mills / Ramyar Gilani – Baylor College of Medicine*

16. Major Truncal venous Injuries

- a. Trauma: Joe Galante, UC Davis
- b. Vascular: Matt Mell, UC Davis

17. Peripheral Venous Injuries

- a. Trauma – Elliott Jessie, Walter Reed
- b. Vascular – Brandon Propper, Walter Reed

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SPECIAL TOPICS IN VASCULAR INJURY CARE – Section Editor – Pedro Teixeira

18. Complications of vascular injury management

- a. Trauma – Carlos Brown – UT Austin
- b. Vascular – Lucas Ferrer – UT Austin
 - i. Notes – identification and management of
 - 1. Infection – imaging, tagged WBC scan utility
 - 2. Access complications / pseudoaneurysms
 - 3. Endoleaks – Types and management in trauma setting
 - 4. Thrombosis – extremity ischemia
 - 5. Disruptions / blowouts (brief key ones) – arterial – enteric fistulas, etc.

19. General principles of post-operative management and surveillance

- a. Trauma – Kenji Inaba – University of Southern California
- b. Vascular – Brian Knipp – University of Southern California
 - i. Antiplatelet and Anticoagulation options and choices
 - ii. Follow-up imaging
 - 1. Ultrasound
 - 2. Contrast enhanced

20. Compartment syndrome in the setting of vascular injury

- a. *Trauma – Jan Jansen – University of Alabama Birmingham*
- b. *Vascular – Benjamin Pearce – University of Alabama Birmingham*

21. Solid organ embolization for management of traumatic injury

- a. Trauma – Melike Harfouche, University of Maryland
- b. Vascular – Joe DuBose, University of Maryland

22. Pelvic fracture related hemorrhage

- a. Trauma – Viktor Reva, Russia
- b. Vascular – Chuck Fox, University of Maryland

23. Intercostal vessel hemorrhage management

- a. Trauma – Deb Stein, San Francisco General Hospital
- b. Vascular – Jonny Morrison, University of Maryland

24. Pediatric Vascular Trauma

- a. Pedro Teixeira – UT Austin
- b. Vincent Rowe – LA County

25. Hybrid Trauma Care Environments and Vascular Trauma Teams

- a. Trauma – Juan Duchesne – New Orleans
- b. Vascular - David McGreevy / Tal Horer – Orebro Sweden