Peripheral Vascular Anatomy for the Interventionalist

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If you want to avoid this…

Surgical repair after femoral access
Or this!

Serious Injury & Death Cases Only

E.J. Leizerman

Michael Leizerman
You have to know this…

Peripheral Vascular Anatomy
Aorta

Arch

45 LAO projection
digital subtraction
40-50 cc contrast
Brachiocephalic bifurcation: RAO projection
Aortic Arch: Variations

65% usual pattern

27% left common carotid from brachiocephalic

3% separate origin of left vertebral

5% various patterns, including right subclavian from distal arch
Bovine Arch
Vertebral Artery Originating From Arch

LCCA

Brachiocephalic →
Origin of the right subclavian artery as the most distal arch vessel
Abdominal aorta

AP projection
Lateral for visceral origins
30 cc contrast
digital subtraction
Celiac Axis
Lateral Abdominal Aorta

- Celiac axis
- SMA
Superior Mesenteric Artery

Distribution
Initial course
Inferior Mesenteric Artery
Chronic Aortic Occlusion

Inferior Mesenteric Artery
Meandering Mesenteric Artery

Early Image

Later Image
Renal Arteries

- L1-L2 interspace
- Pass posteriorly and inferiorly from origin
Normal angiogram
Stenosis in body of right renal artery
RAO projection
Renal Arteries

• Vessels per kidney
  – 72% one
  – 26% two
  – 2% three
Multiple renal arteries
Aortorenal Bypass (venous) (constructed 1971)

Left renal artery stenosis
Ectopic Kidney
Common iliac Artery aneurysm

Internal iliac artery

External iliac artery

7/24/01
Iliac Arteries

- AP projection underestimates tortuosity
- Bifurcation: angle tube to contralateral side with caudal angulation
Right Iliac Artery
AP Projection
CIA
IIA
EIA

20 LAO
20 Caudal
Normal Femoral Artery

- Inferior Epigastric Artery
- Common Femoral Artery
- Profunda
- Superficial Femoral
Winslow’s Pathway

Internal mammary
Superior epigastric
Inferior epigastric
Shallow vs Steep LAO Femoral Angio
Femoral and Popliteal Arteries
Superficial femoral artery stenosis

Adductor Canal
Normal Trifurcation

- Popliteal
- Anterior tibial
- Tibioperoneal trunk
- Posterior tibial
- Peroneal
Peripheral Vascular Anatomy
Origin of the right subclavian artery as the most distal arch vessel