

Vascular Skills Lab Three

I. OBJECTIVES

By the end of this laboratory session participants should be able to . . .

- 1) Demonstrate proper use of vascular instruments
- 2) Dissect and gain distal and proximal control of the aorta
- 3) Demonstrate various anastomotic techniques
- 4) Have an understanding of endovascular techniques

II. ASSUMPTIONS

The resident has reviewed vascular anastomosis technique and anatomy. The resident has practiced the art of sewing vascular anastomosis using the graft and suture material provided to them.

The resident will have reviewed basic concepts of endovascular technology and technique.

III. SUGGESTED READING

Chapters 184, 191, and 195 in Mastery of Surgery, 5th edition. Editor, Fischer, J. Lippincott William & Wilkins. Philadelphia 2007.

IV. ANATOMICAL CONSIDERATION

Although the approach to the human aorta is through the peritoneum centrally with the small bowel on the right, in the swine model, the best approach is by mobilizing the intestines to the left. This is best accomplished by incising the right flank attachments of the small and large intestines. The entire bowel is then mobilized to the left, exposing the aorta quite nicely. There are usually one to two spinal arteries off of the posterior of the aorta. One should be cognizant of this when trying to obtain distal and proximal control.

V. DESCRIPTION OF LABORATORY MODULE

Two pigs will be set up for two to three residents per pig. Residents are to dissect out the aorta, obtain distal and proximal control, and make longitudinal arteriotomy. An end to side vascular anastomosis with dacron or gortex graft will then be performed.

An endovascular simulator will be set up in the adjacent lab. Residents will rotate through this station to gain exposure to endovascular techniques and equipment.

VI. DESCRIPTION OF TECHNIQUE/PROCEDURE

This module will be a review of Vascular Labs One and Two. It is an opportunity for the resident to practice the skills gained in these first two labs.

The resident will learn about the various types of guide wires, catheters, balloons and stents used during endovascular procedures. The resident will have opportunity to use the endovascular simulator.

VII. EQUIPMENT NEEDED

- 1) Endovascular trainer and supplies (to be provided by the product representative)
- 2) 5mm dacron or gortex grafts of 15cm length x6
- 3) 5-0 prolene on vascular needle (RB-1 or RB-2)
- 4) Satinsky vascular clamps
- 5) Bulldog Vascular clamps
- 6) Castro-viejo needle drivers x2
- 7) Right angle clamps
- 8) Debakey forceps
- 9) Metzenbaum scissors x2
- 10) Potts scissors x2
- 11) Suction
- 12) weitlaner retractors
- 13) Gloves

VIII. REFERENCES

Chapters 184, 191, and 195 in Mastery of Surgery, 5th edition. Editor, Fischer, J. Lippincott William & Wilkins. Philadelphia 2007

The Royal College of Surgeons of Edinburgh Surgical Knowledge and Skills Web Site. <http://www.edu.rcsed.ac.uk/index.htm>



