

UT SOUTHWESTERN DEPARTMENT OF SURGERY

TECHNICAL SKILLS COURSE OUTLINE

Course Title: Hemodialysis grafts and fistulas

Course Director: Name: R. James Valentine, MD
Specialty: Vascular Surgery

Participants: Specialty: General Surgery Residents
Level: PGY-2
Number of participants for the entire course: 15

Expected Attendance:

of Wednesday Morning Sessions Assigned to Each Trainee: 1
Duration of Each Session (max 2 hrs): 1.5 hrs
of Trainees per session: 15

Course Completion Verification -

Attendance-based - based on the trainee attending all designated sessions
 Entire Course - Is the entire course solely based on attendance?
 Part of the Course - Is attendance to designated sessions required in addition to other components, as listed below?

Repetition-based - based on the trainee performing a specified number of repetitions
of Repetitions: 15-20 reps

Proficiency-based - based on the trainee reaching a specified level of proficiency
Component(s): _____
Method for determining proficiency: _____

Written Testing - based on passing a written test
Component(s): _____

Documentation of Watching Videos/CD's/Web-based Materials - based on proctor or instructor verification that the trainee has watched the specified videos/CD's/Web-based materials
Component(s): _____

Other Methods (specify method) _____
Component(s): _____

Self-study or Self-practice (Is self-study or self-practice an expectation of this course?)

No

Yes (*specify*)

Self-study component(s): _____

Estimated time requirements for self-study: _____ hrs.

During what phase(s) of the course is self-study to be completed? _____

Self-practice component(s): _____

Estimated time requirements for self-practice: _____ hrs.

During what phase(s) of the course is self-practice to be completed? _____

Training Location(s): J-9 OR

Equipment/Simulator(s): Suture boards, binder clips, 6 mm PTFE grafts, 5-0 prolene suture, needle drivers, forceps, suture scissors, ex vivo porcine model

Other Resources (Textbooks, CD-ROMS, Videos, etc): N/A

Educational Scope:

Skills –Creation of an end-to-end anastomosis.

Cognitive -

Teaching preoperative evaluation of patients requiring hemodialysis access, hemodynamics of arteriovenous fistulas, and postoperative complications.

Judgment –

Understanding DOQI guidelines for hemodialysis access.

Learning Objectives:

- 1) Understand the basics of hemodialysis access, including preoperative evaluation and choice of access.
- 2) Understand the hemodynamics of arteriovenous fistulas.
- 3) Recognize and manage postoperative complications including steal, aneurysms, venous hypertension, and infection.
- 4) Demonstrate end-to-end anastomosis.

Summary of Curriculum, Teaching Methods, and Resource Utilization

1. Preliminary seminar session led by faculty.
 - 1) Teach the indications for hemodialysis access.
 - 2) Discuss the preoperative evaluation of patients requiring hemodialysis access.
 - 3) Teach the DOQI guidelines.
 - 4) Discuss the hemodynamics of arteriovenous fistulas.
 - 5) Discuss recognition and management of hemodialysis complications.
 - 6) Draw end-to-end anastomosis.

2. Skill session. Two residents/suture board. One acts as surgeon and the other acts as assistant, then switch. Demonstration end-to-end anastomosis.

Methods for giving feedback to learners (Formative and Summative):

Direct observation with immediate feedback. The faculty observes each team throughout the session and comments on individual performance.

Methods for Assessment of Learners:

Questions to assess learning cognitive information. Direct observation of skill with immediate feedback.

Methods for Remediation: As above.

Methods for Course Evaluation:

By Learners: E-Value online system
Other Methods (*specify*) General comments at conclusion of exercise.
Faculty: E-Value online system
Other Methods (*specify*) N/A

Materials:

Suture boards, binder clips, 6 mm PTFE grafts, 5-0 prolene suture, needle drivers, forceps, suture scissors

1 ft PTFE graft/trainee x15 15 ft

5-0 prolene suture x 5/trainee 75 sutures

Porcine aortas and subclavian veins (obtained from processing plant) X 10. 1 per team + 2 extra