

“A fibrin sheath is a circumferential sleeve of endothelium that forms around the surface of implanted central venous catheters and frequently remains intact within the lumen of the vein after removal of the catheters. We describe a new entity of infective endovascular fibrin sheath vegetations” Tang et al (2015).

Reference:

Tang, S., Beigel, R., Arsanjani, R., Larson, B., Luthringer, D. and Siegel, R. (2015) Infective Endovascular Fibrin Sheath Vegetations - a New Cause of Bacteremia Detected by Transesophageal Echocardiogram. The American Journal of Medicine. April 9th. .

Fibrin sheath associated with central venous catheters [@ivteam](http://ctt.ec/1e2Tz+)  
#ivteam

Click To Tweet

Abstract:

**BACKGROUND/PURPOSE:** A fibrin sheath is a circumferential sleeve of endothelium that forms around the surface of implanted central venous catheters and frequently remains intact within the lumen of the vein after removal of the catheters. We describe a new entity of infective endovascular fibrin sheath vegetations.

**METHODS:** Records of patients hospitalized and found to have echocardiographically-identified infective endovascular fibrin sheath vegetations at our institution, Cedars Sinai Medical Center, from 2010 to 2014 were reviewed for clinical variables of interest. Collected data included medical history, physical exam findings, laboratory, microbiology, imaging, a prior history of presence of a central venous catheter, treatment and outcomes

**RESULTS:** Eleven patients (20-77 years old, 6 women, 5 men) found to have fibrin sheaths by transesophageal echocardiogram. All of the infective endovascular fibrin sheath vegetations were identified by transesophageal echocardiography while none were seen with transthoracic echocardiography. Eight of 11 patients were critically ill, septic, and admitted to the ICU. Six patients were intubated and required vasopressor therapy. All cases were treated with long term antibiotics, 5 were treated with anticoagulation and 2 were treated with mechanical thrombectomy. Mortality was 36% with death ranging from 44 to 251 days after diagnosis. The 90-day hospital readmission rate was 55%.

**CONCLUSION:** Infective endovascular fibrin sheath vegetations are not seen with

transthoracic echo. They may be overlooked and not seen by transesophageal echocardiogram unless the vena cava is adequately imaged. Moreover, fibrin sheath vegetations are associated with a high morbidity and mortality. They should be treated as a serious endovascular infection and managed with aggressive medical and/or interventional therapies.

**Thank you to our partners for supporting IVTEAM**