Top Ten Things to Know
Vascular Graft Infections, Mycotic Aneurysms, and Endovascular Infections

1. While vascular graft prostheses infection is not often a complication of reconstructive vascular graft surgery, it can be accompanied by high morbidity and mortality.

2. Broad location categories for vascular graft infection (VGI) include
   - Extracavitary: primarily in the groin or lower extremities
   - Intracavitary: primarily within the abdomen or less commonly within the thorax

3. Graft location determines the frequency of VGI. VGI can have highly variable clinical characteristics which are related to location (extracavitary or intracavitary), infection pathology, and the duration of time since surgery.

4. Infection rates:
   - Extracavitary grafts: 1.5%-2%; the rate can be 6% for vascular grafts in the groin.
   - Groin: up to 6%
   - Intracavitary grafts: about 1%-5%

5. “Major complications of VGI include sepsis, amputation, disruption of infected anastomotic suture line with rupture or pseudoaneurysm formation, embolization of infected thrombi, reinfestation of reconstructed vascular grafts, enteric fistulae to the small or large bowel, bacteremic spread of infection to other sites, and death.”

6. Changes in microbiologic epidemiology have been a result of improvements in surgical technique and the use of prophylactic antistaphylococcal antimicrobial therapy.
   - “Gram-positive cocci account for at least two-thirds of VGI.”
   - “Pseudomonas aeruginosa is now the most common cause of gram-negative infections and accounts for at least 10% of VGI.”

7. Causes of VGI:
   - Most common cause: Intraoperative bacterial contamination of the vascular graft
   - Second most common cause---Spread of infection from an adjacent site (surgical wound infection, or an intra-abdominal or pelvic abscess, for example).

8. Categories of endovascular device infections – those used:
   - to repair of uninfected aortic aneurysms and
   - to treat mycotic aneurysm (MA)

9. Even though “mycotic” is now used to describe fungal infections, the term “mycotic aneurysm” (MA) has been used to describe all infectious aneurysms. More recently, “infectious aneurysm” has replaced “mycotic aneurysm.” MAs are uncommon and rare in children. An aortic MA infection is serious and life-threatening.

10. The risk for infection and serious infection-related complications is increased by underlying co-morbidities.