QUESTION 57
A 47-year-old man on long-term haemodialysis presents with a fever (39.5°C) and chills. He has had multiple thrombosed fistulas and a thrombosed right axillary vein. He had a left subclavian catheter inserted under ultrasound guidance three days ago. On examination he looks well, with a blood pressure of 170/80 mmHg and an exit site of the vascular access catheter with the appearance shown below.

Which of the following management strategies would be most appropriate in his case?
A. Intravenous vancomycin and observation.
B. Immediate haemodialysis.
C. Intravenous cephalexin and observation.
D. Intravenous vancomycin and catheter removal.
E. Replace vascular catheter with a re-wire technique.

Recommended treatment for CVC infections where MRSA is suspected is vancomycin plus gentamicin.

Removal of the line is recommended but if access is an issue then leaving the line in is sometimes considered (assuming the patient is stable).

Indications for line removal:
- Infection due to gram-negative bacilli (especially Pseudomonas aeruginosa), multiple bacteria, or fungi
- Insertion site infection
- Granulocytopenia
- Valvular heart disease
- Septic thrombophlebitis
- Endocarditis
- Metastatic abscesses

This patient has insertion site infection which is an indication for removal of the catheter.

So the correct answer is D – catheter removal and vancomycin.
Most catheter-related infections are caused by coagulase-negative staphylococcus, staph aureus or enterococcus.

Less common pathogens include candida species and gram negative organisms such as E. Coli, Klebsiella and Pseudomonas.

MRSA is becoming more and more common – 25 to 60% of isolates in hospital and 70% in ICU (numbers for MKSAP). About 1/3 patients with previous MRSA colonisation or prior infection will develop a subsequent MRSA infection.

Duration of treatment should be at least 2-3/52 (ID seems to suggest 4-6/52 usually).

Risk factors for MRSA infection include duration of antibiotic administration presence of severe underlying illness, exposure to health care system / ICU.

Mortality from line sepsis varies from 12 to 25%.

Positive blood cultures require exclusion of endocarditis with TOE.

Coagulase-negative staph is low-virulence and can usually be treated with 1-2/52 of flucloxacillin.