

## Supplemental Digital Content Figure 1. Central venous access image library

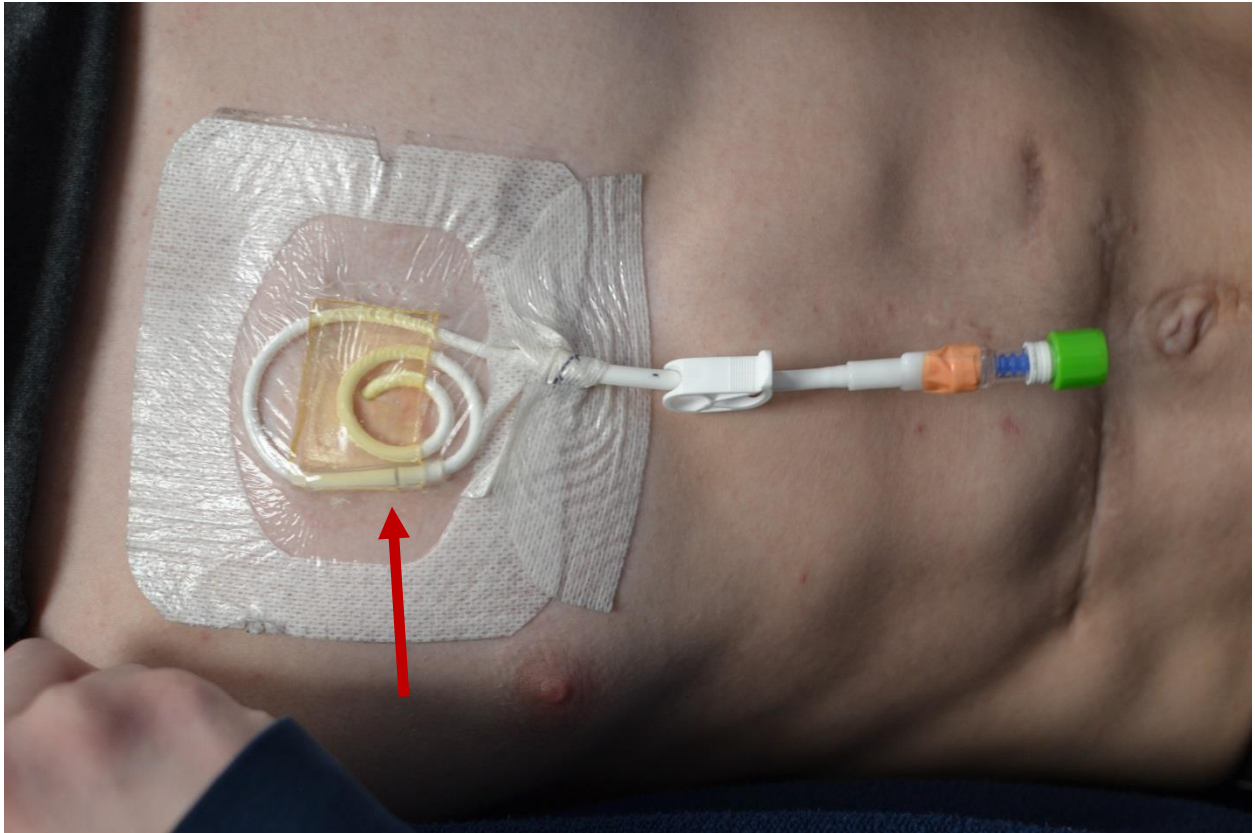
### Central line and dressing

1. Normal tunneled central line
2. Normal double-lumen power PICC
3. a. Skinny portion of the central line in dressing; b. Skinny portion out of dressing
4. Chest radiograph of normal placement

### Complications

5. Outer sheath separated
6. Ruptured internal sheath
7. Ballooning
8. Tegaderm contact dermatitis
9. Reaction to chlorhexidine gluconate
10. a. Central line granulation tissue; b. and c. Central line granulation tissue with and without dressing.
11. Central line associated ulcer
12. a. Fibrin sheath radiograph; b. Fibrin sheath gross specimen
13. Cuff extrusion
14. Flipped line (radiograph)
15. Tunnel infection

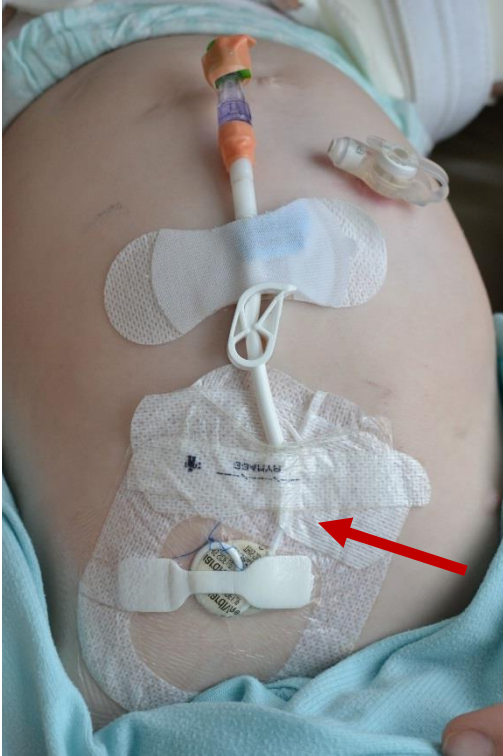
## Central line and dressing



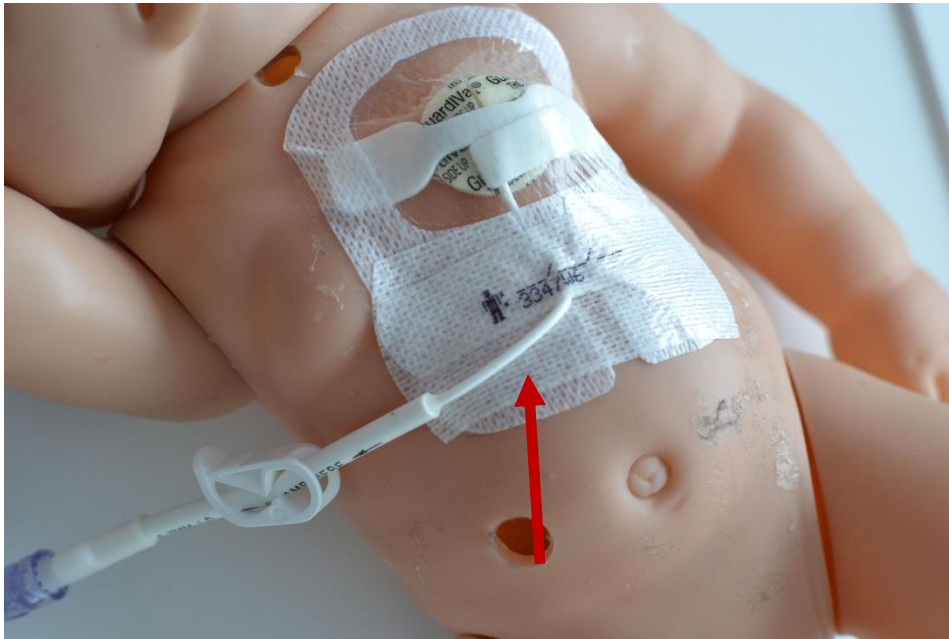
**Image 1. Normal tunneled central line dressing with safety loop, chlorhexidine impregnated dressing, and line repair (arrow)**



**Image 2. Normal double-lumen power PICC with stat lock and chlorhexidine impregnated dressing**

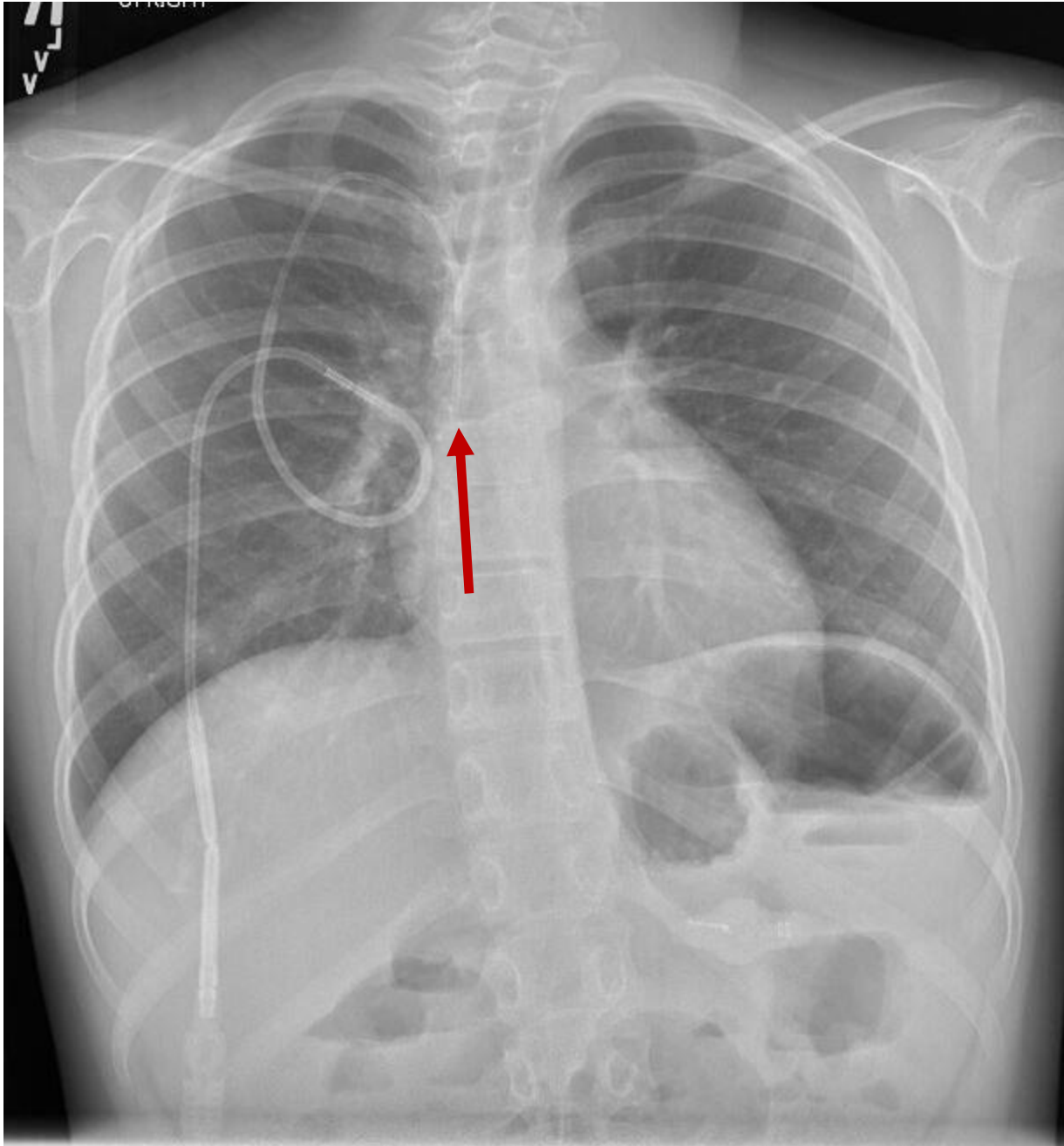


a.



b.

**Image 3a. Skinny portion of the central line in dressing with safety loop (arrow);  
3b. Skinny portion out of dressing with no safety loop (arrow). Ideally the thin  
portion would be under the dressing to prevent mechanical stress.**



**Image 4. Chest radiograph of normal placement, tip at cavoatrial junction (arrow)**

## Complications

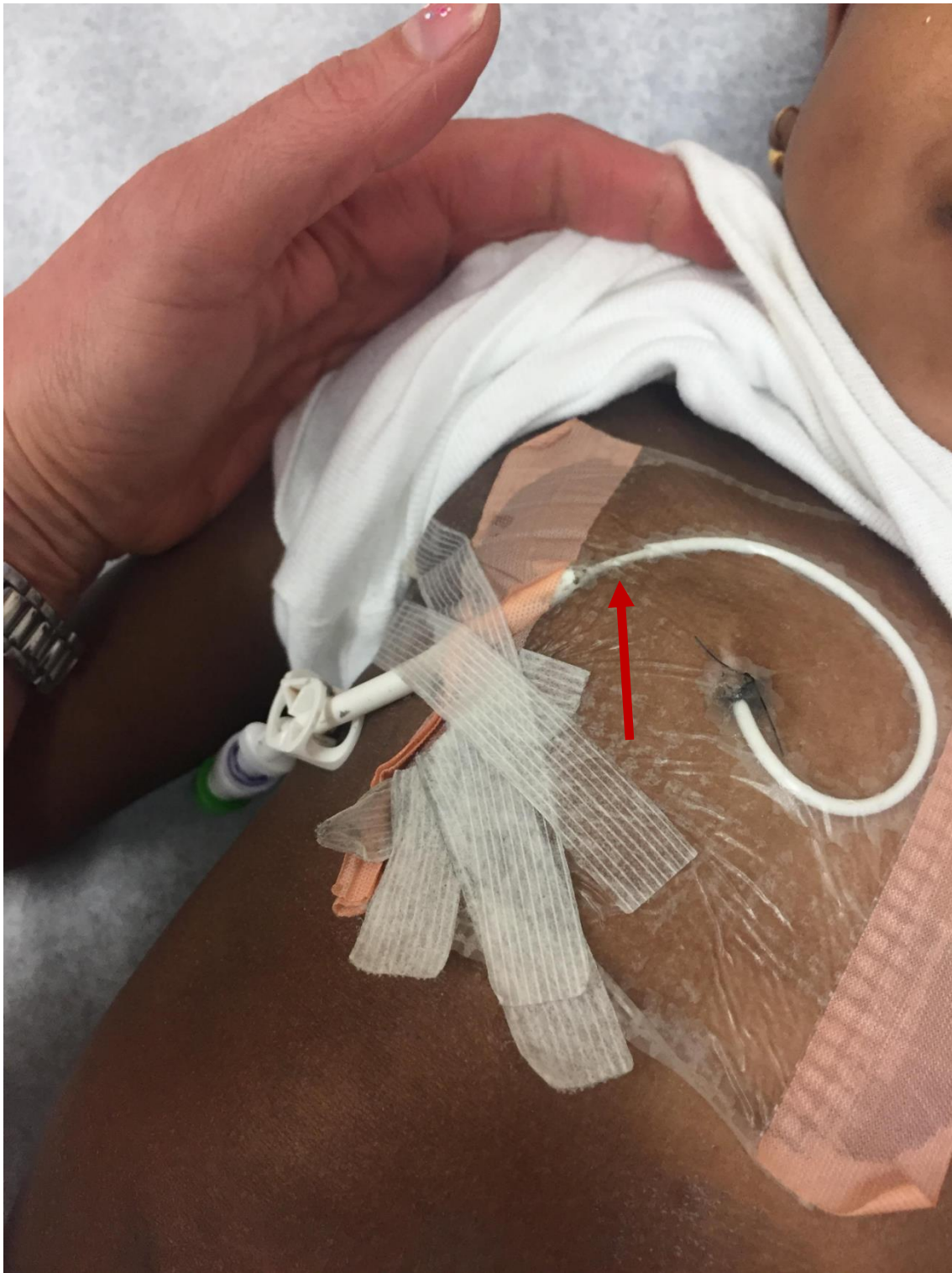
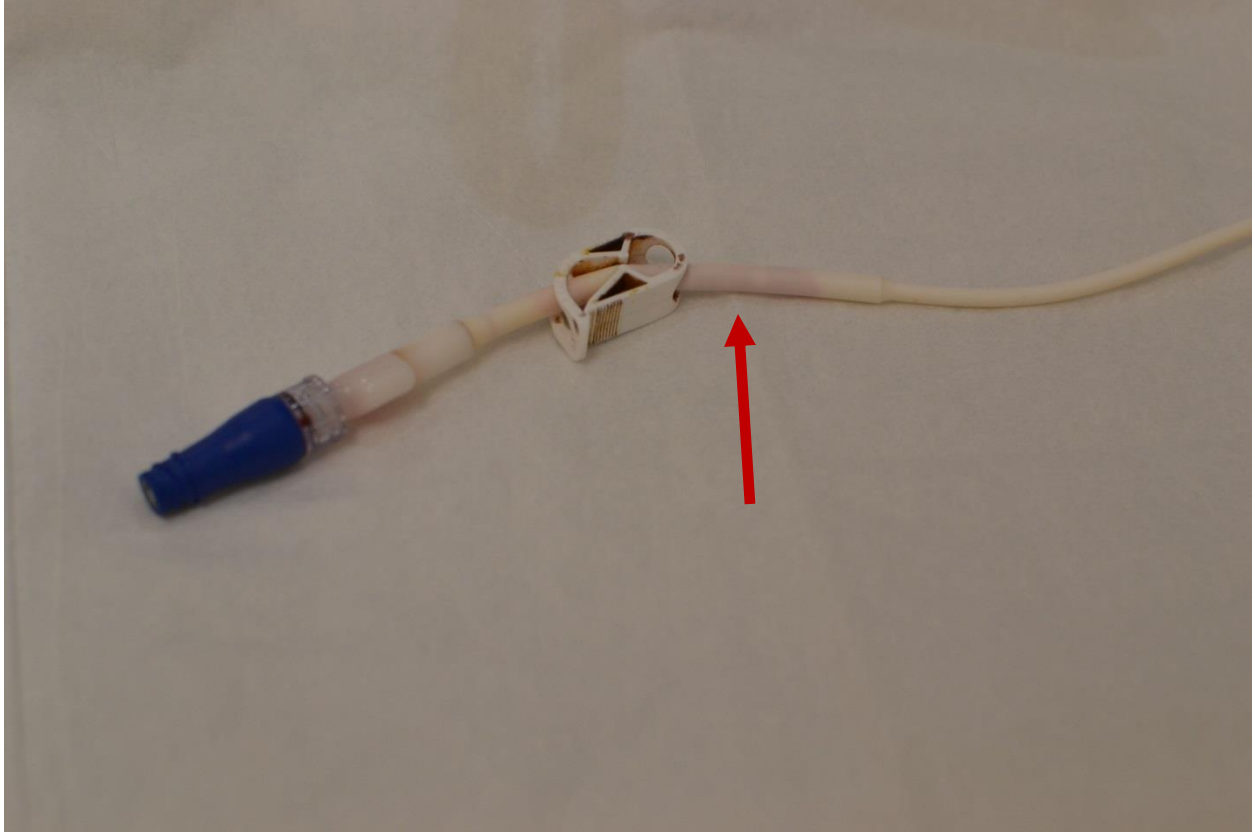


Image 5. Outer sheath separated (arrow)



**Image 6. Inner sheath rupture (arrow)**

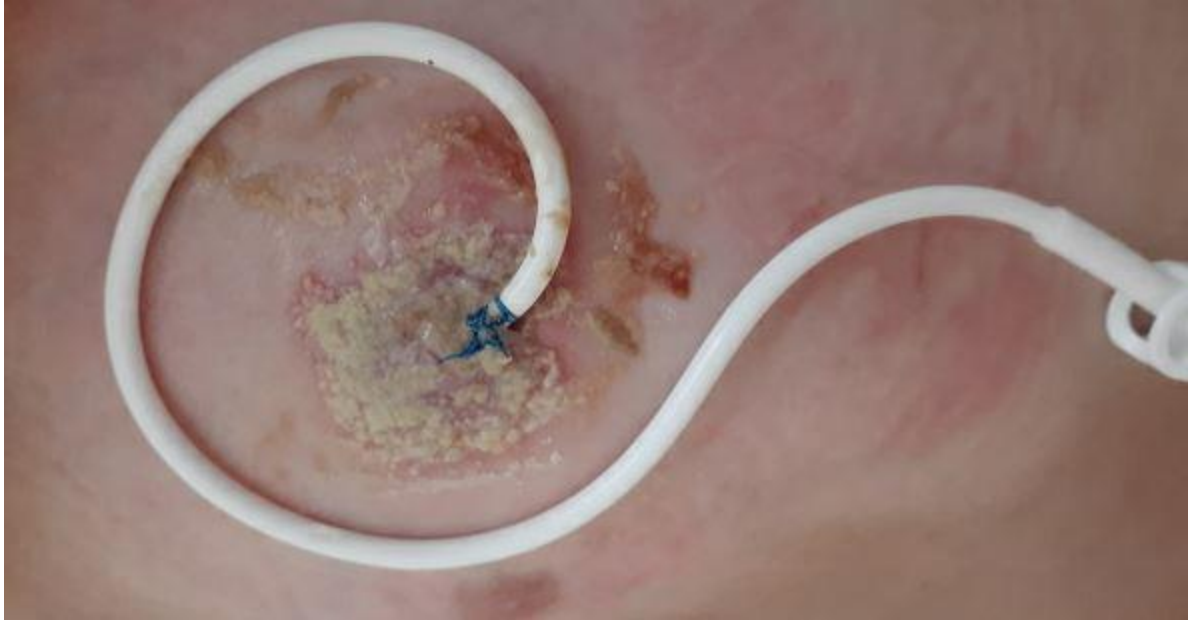


**Image 7. Central line ballooning**





Image 8. Tegaderm contact dermatitis and BioPatch



**9. Reaction to chlorhexidine gluconate**



a.

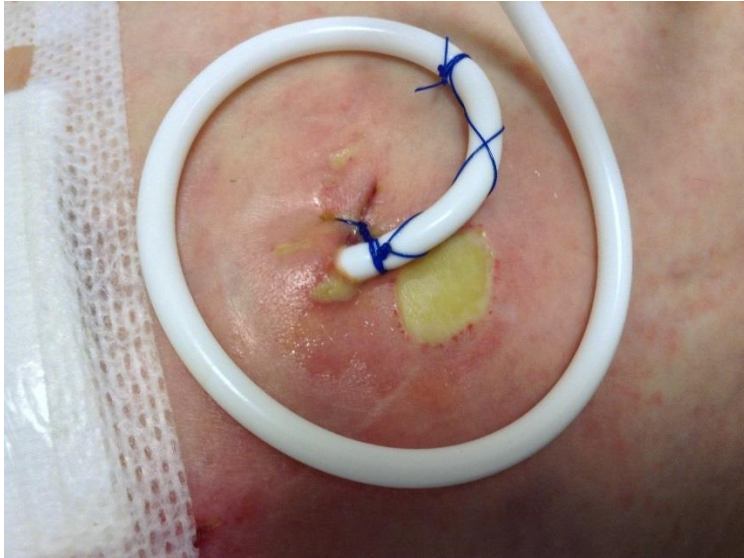


b.

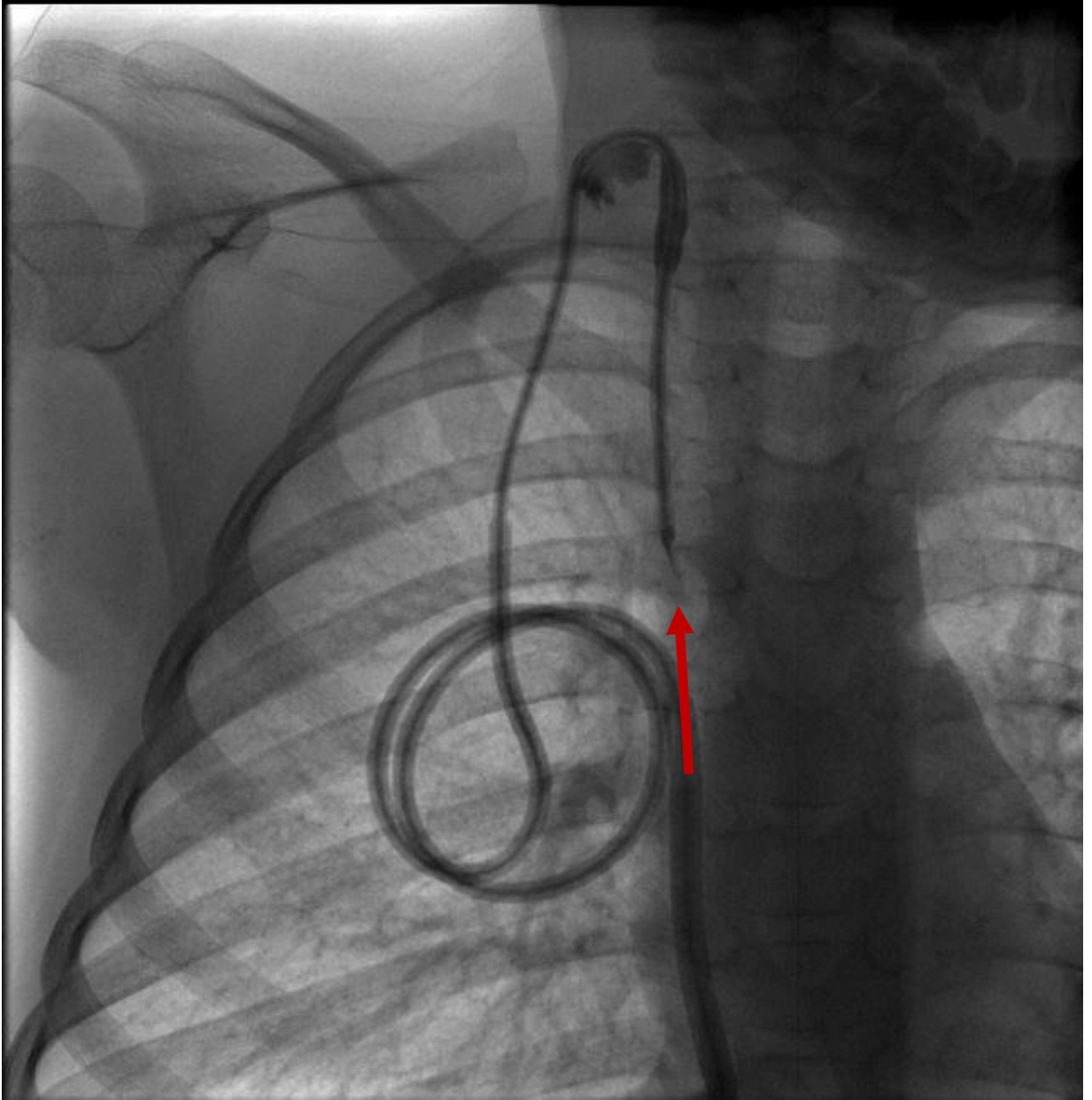


c.

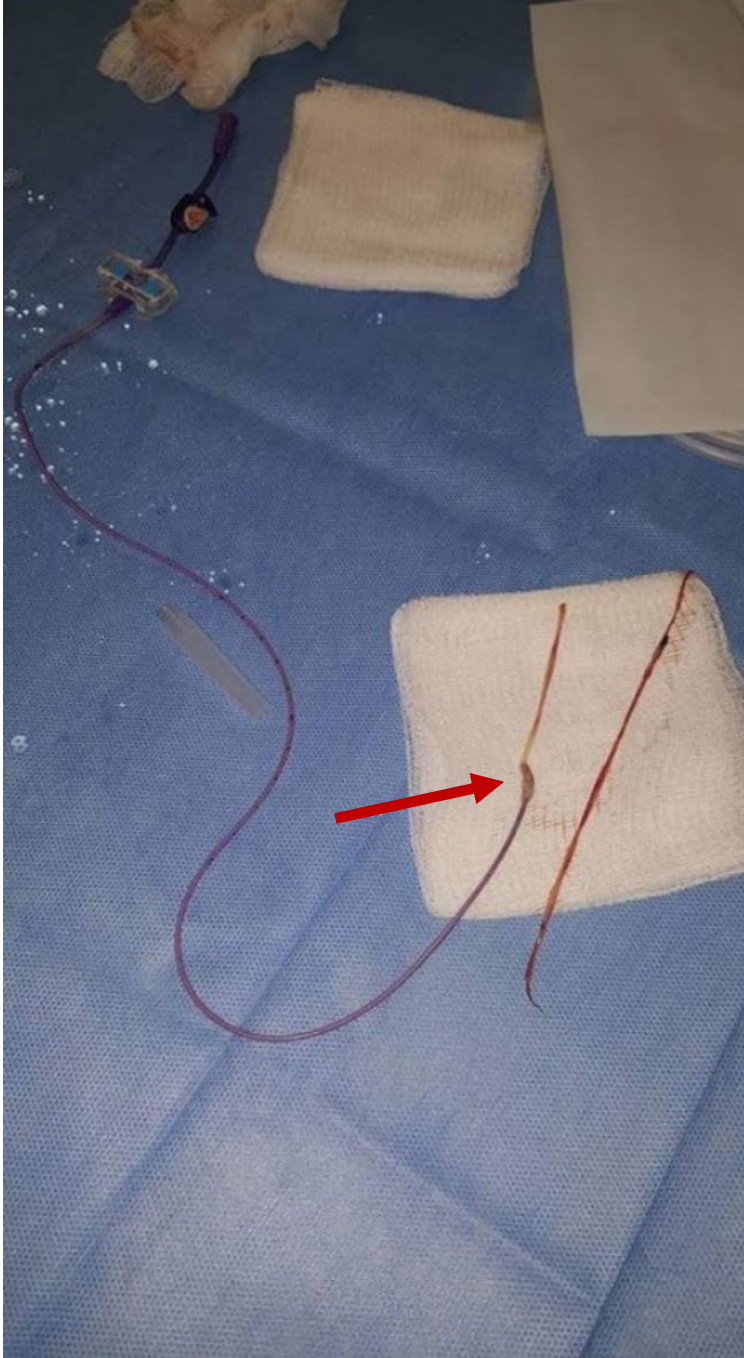
**Image 10a. Central line granulation tissue, b and c. Central line granulation tissue with and without dressing (arrow at central line repair site)**



**Image 11. Central line associated ulcer in various stages of healing**



a.



b.

**Image 12a. Fibrin sheath (Radiograph with arrow) b. Fibrin sheath (Gross specimen with arrow)**



**Image 13. Cuff extrusion**



**Image 14. Flipped line (radiograph)**





**Image 15. Tunnel infection**