A venous port system is composed of a port chamber attached to a central catheter, which is implanted into the central venous system” Machat et al (2019).

Abstract:

Central venous port devices are indicated for patients, who need long-term intravenous therapy. Oncologic patients may require intermittent administration of chemotherapy, parenteral nutrition, infusions, or blood transfusions. A venous port system is composed of a port chamber attached to a central catheter, which is implanted into the central venous system. The subcutaneous location of the catheter chamber improves the patients’ quality of life and the infection rate is lower than in non-totally implantable central venous devices. However, proper implantation, use, and care of a port system are important to prevent short- and long-term complications. Most common early complications (< 30 days) include venous malpositioning of catheter and perforation with arterial injury, pneumothorax, hemothorax, thoracic duct injury, or even cardiac tamponade. Delayed complications include infection, catheter thrombosis, vessel thrombosis and stenosis, catheter fracture with extravasation, or fracture with migration or embolization of catheter material. Radiologic imaging has become highly relevant in intra-procedural assessment and postoperative follow-up, for detection of possible complications and to plan intervention, e.g., in case of catheter migration. This pictorial review presents the normal imaging appearance of central venous port systems and demonstrates imaging features of short- and long-term complications.

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