



The Care of Implantable Central Venous AccessPort

1. What is implantable central venous access port:

Implantable central venous access port is commonly known as artificial blood vessels, hereinafter referred to as it. It is a composite of siliceous material and consists of an injection base and a catheter. The base is about the size of NT \$ 5 or 10 coin, the silicon diaphragm in the middle can be repeatedly punctured, and the catheter is connected to the vena cava. (See Figure. 1).

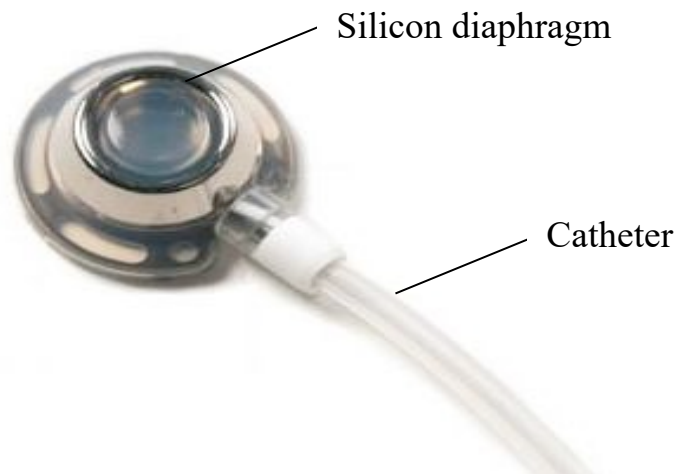


Figure1.Implantable central venous access port

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All information above has been reviewed by Hematology specialists
Edited and published by the Department of Nursing,
TaichungVeteransGeneralHospital

2. The benefits of installing implantable central venous access

port:

The artificial blood vessel can not only provide the treatment such as intravenous therapy, chemotherapy or intravenous nutrition supplement, but also reduce the trouble of repeated needle sticking or difficult injection.

3. Installation process:

The implantation of artificial blood vessels needs to be performed surgically. Local anesthesia is used. The base is fixed to the subcutaneous part from the clavicle to the anterior chest. The catheter enters the junction of the superior vena cava and the right atrium from the subclavian vein (Figure 2). Surgical wounds can be sutured or non-sutured. (Please discuss with your surgeon which option is most suitable). Chest X-ray will be arranged to confirm the location of the catheter after surgery.

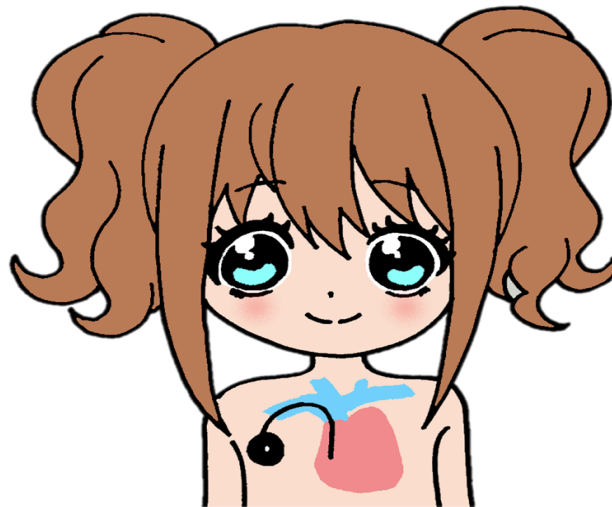


Figure 2. Schematic diagram of artificial blood vessel implantation site

4. Post installation (postoperative) care needs:

I. Pay attention to the wound condition:

After the operation, according to the doctor's instructions, pressure will be applied with gauze for about 1 to 3 days. After the gauze is removed, the wound care is as follows:

- i. Non-suture wound: Surgical wound will be pasted with

steri-strips tape after operative, without gauze covering. Keep the wound clean and dry until it falls off, do not tear it off deliberately .

- ii. Suture wound: Clean the wound with 10% betadine for two minutes at first wipe with normal saline daily for second. Then use the new gauze to cover the wound. If the wound or dressing becomes wet, change the gauze immediately. The stitches will be removed after approximately 7 days as estimated by a physician.
 - iii. After the operation, if you have any problems such as wound pain, chest pain, dyspnea, and shortness of breath, you should tell doctor and nurse immediately.
- II. Timing of artificial blood vessel use: Decided after evaluation by the attending physician.
- III. Artificial blood vessel maintenance: To avoid blockage of the base due to thrombosis, flush with anticoagulant before removing the needle. During the non-treatment period, you should return to the clinic for flushing at least every four weeks.
- IV. The following precautions should be noted after discharge from the hospital:
- i. After the wound has healed/sutures removed, you can take a bath or shower normally, and the artificial blood vessel implanted into the epidermis can be cleaned! Rub the soap/shower cream into a small lather, gently cleanse and rinse off. Daily skin cleansing can reduce skin colonies and reduce bloodstream infections.
 - ii. If there's redness, swelling, increased warmth/pain or discharge noted around the wound, fever or any other signs of infection, return to the hospital immediately.
 - iii. The prominence of the epidermis at the implant site will vary depending on the individual's body size, but it does not affect daily activities.
 - iv. Daily life: general activities are not restricted, but direct impact on the base should be avoided; in order to avoid displacement of the artificial blood vessel, excessive use of the arm on the implanted side should be avoided, such as tennis, golf, bowling and other activities, especially avoid 360-degree arm rotations, chest expansions, or lifts over 2kg.

5. Self-care points during anticancer drug infusion:

- I. When leaving the ward or treatment bed (chair), be sure to inform the nurse.
- II. If you find intravenous stand for any abnormality, please inform the nurse.
- III. Do not pull or kink the tubing to keep the drip tubing flowing. If the medicine leaks, the infusion is not smooth, or the injection site has pain, burning, swelling, redness, etc., notify the medical staff immediately.
- IV. When lying in bed or sleeping, do not use your hands as the pillow or laterally to the implant site. Wound dehiscence, displacement of the base, or slippage of the needle are prone to occur the bulging condition caused by the compression of the surrounding tissue.
- V. Avoid bending over, as the lower center of gravity of the body will cause needle to slip out. If necessary, fix the injection site with your hands before bending over.

6. Conclusion

After the artificial blood vessel has been installed, daily life can still be carried out, as long as some behaviors are avoided, such as avoiding 360-degree rotation of the arm, chest expansion exercises, or lifting more than 2 kg of objects, etc., and remember to visit outpatient clinic (OPD Clinic) regularly to flush the pipeline to avoid blockage. Others can be the same as ordinary people, and can reduce the pain and the chance of drug leakage each time. For patients who need chemotherapy, it is a good choice to improve the quality of life.

7. References

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Let's take a test to confirm that you have a thorough understanding.

1. Maintenance of artificial blood vessels: To prevent the base from being blocked due to thrombosis, the angle needle of the artificial blood vessel should be flushed with anticoagulant before removal.
 Yes No Not sure
2. When the artificial blood vessel is not being treated, it should be returned for flushing at least every four weeks.
 Yes No Not sure
3. Equipped with an artificial blood vessel side arm, it is possible to rotate the arm 360 degrees, expand the chest, or lift objects weighing more than 2 kilograms.
 Yes No Not sure
4. When resting in bed or sleeping and the artificial blood vessel is connected to the angle needle, do not rest your hand on the pillow or sideways to the side of the artificial blood vessel implantation site.
 Yes No Not sure
5. Avoid bending over, as the lower center of gravity of the body will cause needle to slip out. If necessary, fix the injection site with your hands before bending over.
 Yes No Not sure