



Our Heart for Dialysis

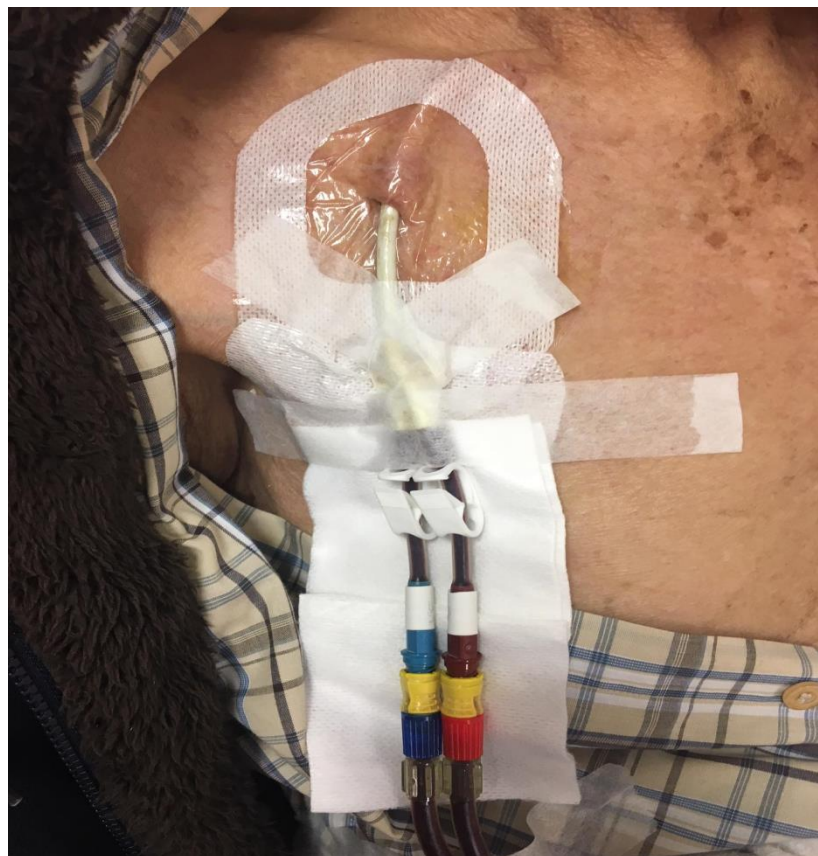
Hemodialysis Catheter

What is Hemodialysis Catheter?

Hemodialysis is a treatment to replace the function of your kidneys when they are failed. In the process of hemodialysis, your own blood will be drawn into the dialysis machine in a relatively high speed, cleaned (remove waste products), remove excess water, and then return back to your body. Hemodialysis catheter is one of the few ways of allowing the blood to circulate between your body and the machine.

To allow drawing and returning blood in an efficient way, all hemodialysis catheters are inserted into large size central veins of the body. Usually the central veins inside the neck (internal jugular vein) and over the groin (femoral veins) are being used.

Hemodialysis catheter have 2 openings inside your central vein and 2 caps outside your body: one with a red (arterial) opening is to draw the blood from your vein into the dialysis machine and the other with blue (venous) opening allows cleaned blood to return back to your body.





Types of Hemodialysis Catheter

There are broadly two major types of hemodialysis catheters namely non-tunneled catheter and tunneled catheter.

Non-tunneled catheter go through the skin and into the central vein directly. The catheter is anchored to the surrounding skin by a stitch to avoid dropping out. Non-tunneled catheter is easier to insert but can only be kept inside the body for short period of time (few days to two weeks depend on the vein location). Individuals with non-tunneled catheter is not recommended to be discharged from the hospital because of the risk of catheter dislodge and bleeding. Non-tunneled catheter may get infection easier when the catheter being kept for a longer time.

For tunneled catheter, between the skin entry site and central vein entry side, there is a beneath the skin tunnel for the catheter to travel. Furthermore, the catheter also has a ~1cm cuff that help to adhere the catheter to the surrounding tissue of the person. With proper care, tunneled catheter can be used for a longer time. Individuals with the tunneled catheter may back to their home and resume most of their usual activities.

How Do I Take Care of My Catheter?

- Keep the dressing dry and clean.
- Cover the catheter with clean waterproof material such as plastic bag during showering to avoid the dressing gets wet. (see below)
- Do not swim while you are having a catheter.
- Ensure your catheter is securely tape all the time to prevent pulling/bending of your catheter.
- Do not meddle with your catheter.
- Do not use sharp objects, such as scissors around the catheter.
- The caps and clamps of your catheter should be kept tightly close when not being used for dialysis.
- Wear a mask over your nose and mouth while the catheter is opened during connection to dialysis machine to minimize saliva and nasal droplets contaminating the catheter opening.
- Do not scratch the skin around your catheters vigorously. Broken skin can cause infection. Do expect mild itchiness due to perspiration.
- We recommended that you do not take part in any contact sports. If you do, please ensure that your catheter is securely taped.
- Do mindful that a seat belt may cause discomfort over the catheter site; extra padding beneath the belt may reduce this.
- Unless it is for medical emergency, the catheter should not be used for any other purpose other than dialysis. All healthcare workers who are using the catheter must have received proper training.



Disadvantages of Long Term Tunneled Hemodialysis Catheter

1. Catheter or skin around the catheter insertion may become infected and the infection could spread into blood stream easily. Proper care and handling of the catheter reduce risk of infection. Nonetheless, the chance of infection increases with longer time catheter in.
2. The catheter inside the central vein may induced blood clot or fibrin sheath to form inside the vein and eventually induced narrowing and blockage of the blood vessel. The risk of narrowing and blockage of the central vein also increases with “catheter in” time.

When Should I Report to Dialysis Nurse Immediately?

If your experience the possible signs and symptoms of catheter infection as following:

- Fever
- Chills and shivering
- Discharge from catheter exit site/your dressing get soil
- Pain, soreness, tenderness, odor, swelling around the catheter exit site
- Or if you noticed any breakage of the catheter, exposure of the catheter cuff.
- Bleeding from or around the catheter



Picture showing redness around the hemodialysis tunneled catheter skin exit site together with some discharge present signifying catheter infection



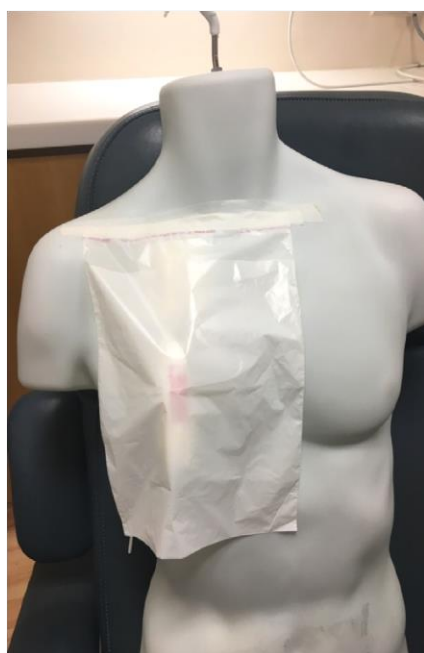
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Picture showing redness around the hemodialysis tunneled catheter skin exit site signifying catheter infection



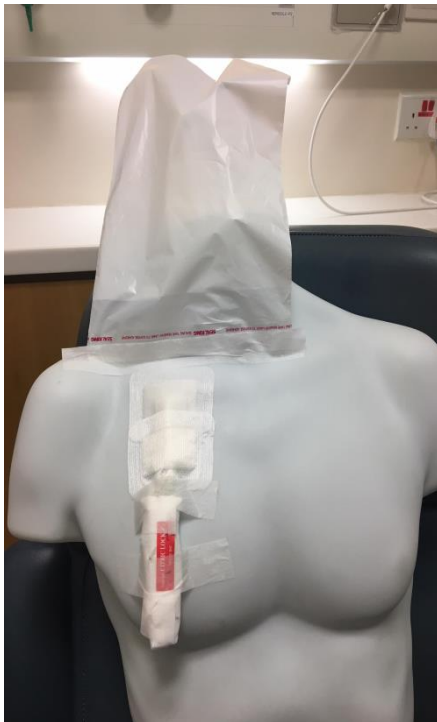
Tape one edge of the plastic bag



Place the tape and the plastic bag over the body above the whole catheter.



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Flip the plastic bag over and tape the inner upper part of the plastic.



Flip the plastic bag down and tape either right side or left side of the plastic bag.



Continue to tape the remaining side of the plastic bag.



Tape the lower part of the plastic bag; you are done and ready for shower.

!!Remember it is important to avoid showering directly towards the tape and plastic bag region.

After shower, remove the tape and check the catheter dressing to ensure it has not been wet.

Acknowledgement: SoDAS would like to thank Mdm. Ong and her husband, and Mr. Tan for helping out with the preparation of this educational material.