

PERMANENT VASCULAR ACCESS FOR PERFORM HEMODIALYSIS – DIALYSIS PORT



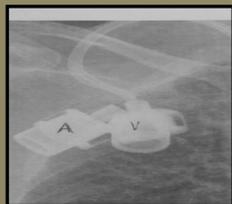
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PURPOSE

Permanent hemodialysis catheter is an alternative vascular access for patients in whom construction of AV fistula is not possible or is contraindicated. Hemodialysis port is an alternative to permanent catheters. It is associated with better quality of life and is best suited for young and active patients.



Hemodialysis port



X-ray image hemodialysis port

RESULTS

- We have implanted hemodialysis ports in fourteen patients; most of them were young and active patients and one patient had dementia and a history of manual permanent catheter displacement.
- All patients have had a previously implanted permanent tunneled central venous catheter.
- In two patients, reconstruction or replacement of the port chamber was necessary due to very low body mass.
- One patient, hemodialysis port was removed due to haematoma infection at puncture site.

In the remaining patients the following complications were recorded: swelling and skin changes in the area of hemodialysis port puncture site, port infection (3 patients), occasional bleeding at hemodialysis port puncture site following hemodialysis needle removal and blood flow interference as long as only heparin or citrate were used as filling solution.

MATERIALS AND METHODS

In our center, we have been implanting hemodialysis ports since March 2016. All implantations were done under ultrasound and fluoroscopy guidance in aseptic conditions. After implantation, we continuously monitored the position of the hemodialysis port chambers and tip of the catheter, implantation and puncture site and flow parameters during every hemodialysis. Venous and arterial pressures during hemodialysis were monitored continuously in relationship with flow volume. Special attention was paid to possible infections of the hemodialysis port.



The first port implanted in our hospital



Connecting the patient to hemodialysis via port



A young patient with an implanted dialysis port



CONCLUSIONS

Considering the short learning curve of nurses and physicians that are handling hemodialysis ports and some complications at the beginning, we can observe quite stable function of all ports in last two years with acceptable, frequency of complication rate.

Hemodialysis port can be a good solution for demented patients and younger patients without arteriovenous fistula, offering a better quality of life. By optimising the filling solution hemodialysis port with a combination of thrombolytics (rTPA) and anticoagulant (standard heparine) and after changing the dressing strategy of puncture site and skin over the hemodialysis port chambers the complication rate was significantly lowered.

The complication rate in last two years was comparable than observed in patients with central venous catheter and quality of life was significantly better compared to permanent central venous catheter.