

# Translumbar Central Venous Hemodialysis Catheters

## **Aim:**

Hemodialysis catheter translumbar placement enables high quality venous access in patients with exhausted usual venous routes. The aim of this study is to evaluate technical success of catheter insertion and long-term patency of translumbar hemodialysis catheters (TLC) and to compare the results with standard tunneled hemodialysis catheters inserted via internal jugular vein (SC).

## **Material and methods:**

Between 2010 and 2018 translumbar dialysis catheter (TLC) was inserted in 37 patients in whom occlusion of internal jugular and brachiocephalic veins precluded standard implantation route. 17 (45,9 %) men and 20 (54,1 %) women were treated with age median 64,0 years, range 41–89 years. The TLC patients were compared with standard tunneled hemodialysis internal jugular catheter patients (SC), in whom procedures were performed in the same time period. SC was placed in 196 patients, 113 (57,7 %) men and 83 (42,3 %) women, with age median 68,5 years, range 16–91 years.

## **Results:**

The total time of follow up for the TLC patients was 1–2097 days with median 673 days, while the follow up for the SC patients was 1–2915 days with median 310 days. Technical success rate for the insertion was 97,4 % in the TLC group and 98,6 % in the SC group. Periprocedural complications occurred in 10,3 % in the TLC group and 4,2 % in the SC group, all of them were self-limiting. 23 (62,2 %) patients out of 37 died in the TLC group and 53 (27,2 %) patients out of 196 died in the SC group. During the period of follow up there were complications discontinuing catheter patency in 13 catheters from the TLC group and in 60 catheters from the SC group. The primary patency in 1 year and 4 years of follow up was 76,7 % and 39,5 % in the TLC group vs 69,0 % and 27,7 % in the SC group. There was no statistically significant difference between these two groups (Log-rank test,  $P=0,550$ ). The incidence rate of infection-related and patency-related complications calculated for 1000 catheter-days was 0,15 and 0,11 in the TLC group vs 0,33 and 0,25 in the SC group. During the study period, 15 interventions in the TLC and 75 in the SC group were performed, aimed at maintaining catheter patency.

## **Conclusion:**

The insertion of translumbar central venous catheters is a safe method of achieving dialysis access in patients without usual venous routes. Their long-term patency is satisfactory and may serve as a bridge during search for creation of a new usual dialysis access.