

Role of Internal jugular catheter (IJC) in hemodialysis

Introduction

The therapy of renal failure patients requiring haemodialysis relies heavily on the internal jugular vein catheter (IJC). For patients requiring haemodialysis, the kidney disease outcome quality initiative (K - DOQI) advises that internal jugular vein catheters are the ideal central venous catheters [1].

Patients with renal failure who need haemodialysis are managed well with the help of an internal jugular vein catheter (IJC). The internal jugular vein catheter is the recommended central venous catheter for patients needing hemodialysis, according to the kidney disease outcome quality initiative (K - DOQI). When doing long-term maintenance hemodialysis on patients, tunnelled catheters are favoured [2].

IJC usage in haemodialysis patients has been linked to a variety of problems. IJC usage has been linked to a 2- to 3-fold higher risk of mortality and a 5- to 10-fold higher risk of severe infection in HD patients [3]. In HD patients, CVC, including IJC, has been identified as a significant risk factor for bacteremia, which can result in over 10% of instances of life-threatening sequelae such as septic shock, endocarditis, septic arthritis, osteomyelitis, and abscesses [4]. The nomenclature and definition of problems, patient demographic, measurement units, catheterization length, follow-up, catheter site, insertion, and care, as well as diagnostic techniques, all affect the severity of catheter-related complications [6].

When a catheter is in place or being removed, delayed problems including infection and malfunction of the catheter are most common. To improve patient care, it is essential to prevent catheter-related problems by using the highest level of sterile precautions during catheter insertion and maintenance [5]. Furthermore, early identification and subsequent therapy of IJC-related problems lowers morbidity and mortality and enhances outcomes in these patients receiving hemodialysis. This study's objective is to identify the risks connected to IJC used for haemodialysis at a renal care facility in southern Nigeria.

Conclusion

In our centre, where the use of an atriovenous isthmus and/or graft is not always possible, IJC plays a very important role in patients who are receiving maintenance hemodialysis. Infections and problems associated to guidewires were the most frequent early and late complications, respectively. Careful treatment of the IJC during the intra- and interdialysis period will decrease late difficulties. Use of ultrasound/fluoroscopy guided insertion will significantly reduce immediate issues. It is advised to do a multi-center study with a bigger sample size.

Haemodialysis patients may experience late problems linked with IJC that might be catheter-related or unrelated, infectious or non-infectious, and minor to severe. In this trial, there were 34.9% late problems, which included infection, low blood pressure, haemorrhage, and catheter dislodging. They were more prevalent in men and older age groups, which may be connected to younger age groups and females' superior personal cleanliness.

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Infection, poor oxygenation, dislodging, and rhabdomyolysis are among the 11.3 percent fewer late problems documented by Chung et al. [6]. As late consequences, thromboembolism, cerebral haemorrhage, broken catheters, and central venous stenosis have also been documented [7].

Other late problems seen in this research were spontaneous catheter removal (which occurred in 6.4%) and bleeding (which occurred in 4.6%). During the surgery, the catheter is often secured at the exit location using sutures. Later, the creation of fibrous tissue around the catheter cuff also helps to keep the catheter in place. However incorrect placement and severe tension on the catheter at the exit location might lead to spontaneous removal/dislodgement. Care in handling the catheter during dialysis, patients and caregivers instruction on scare of the catheter will decrease the spontaneous dislodgement [8].

There have been reports of bleeding of varying degree caused by spontaneous removal, catheter puncture, dislodging of the ligated vascular, and opening of one of the lumens. Mild bleeding that didn't require blood transfusions occurred in this trial.

References

1. Weijmer MC, Vervloet MG, Ter WPM. Compared to tunnelled cuffed haemodialysis catheters, temporary untunnelled catheters are associated with more complications already within 2 weeks of use. *Nephrol Dial Transplant* 19: 670–677 (2004).
2. Dhingra RK, Young EW, Hulbert-shearon TE, et al. Type of vascular access and mortality in US haemodialysis patients. *Kidney int.* 60: 1443-1451 (2001).
3. Powe NR, Jaar B, Furth SL, et al. Septicemia in dialysis patients incidence, risk factors, and prognosis. *Kidney Int.* 55: 1081-1090 (1999).
4. Saxena AK, Panhotra BR, Al-Mulhim AS. Vascular Access Related Infections in Hemodialysis Patients. *Saudi J Kidney Dis Transpl.* 16: 46-71 (2005).
5. Napalkov P, Felici DM, Chu LK, et al. Incidence of catheter-related complications in patients with central venous or hemodialysis catheters: a health care claims database analysis. *BMC Cardiovasc Disord.* 13: 86 (2013).
6. Yeum CH, Kim SW, Nah YM. Percutaneous Catheterization of the Internal Jugular Vein for Hemodialysis. *Korean J Intern Med.* 16: 242-246 (2001).
7. Kornbau C, Lee KC, Hughes GD, et al. Central line complications. *Int J Crit Illn Inj Sci.* 5: 170-178 (2015).
8. Istrate N, Mota E, Cana RD. Central vein catheter complications at haemodialysed patients. *Curr health sci journal.* 40 (2014).