JCINCR Journal of OPEN ACCESS Clinical Images and Medical Case Reports

ISSN 2766-7820

Clinical Image

Open Access, Volume 4

Malfunctioning tunneled dialysis catheter associated with arrhythmias

Mohankumar Doraiswamy¹*; Khaled Boubes¹; Nabil Haddad¹; Anil Agarwal² ¹Division of Nephrology, The Ohio State University, Columbus, OH, USA. ²VA Central California Health Care System, Fresno, CA, USA.

*Corresponding Author: Mohankumar Doraiswamy Division of Nephrology, The Ohio State University, Columbus, OH, USA. Ph: 615-315-1290, Fax: 614-293-3073; Email: drmohankumar90@gmail.com

Received: Feb 02, 2023 Accepted: Feb 21, 2023 Published: Feb 28, 2023 Archived: www.jcimcr.org Copyright: © Doraiswamy M (2023). DOI: www.doi.org/10.52768/2766-7820/2304

Keywords: Hemodialysis; Dialysis vascular access; Complications of tunneled catheter; Tunneled dialysis catheter; Arrhythmias on dialysis; Catheter malfunction.

Clinical image description

Tunneled Dialysis Catheters (TDC) remain a common modality of vascular access and often malfunction because of a myriad of reasons including thrombosis and fibrin sheath formation. A common practice is to use thrombolysis for TDC malfunctional with decreased blood flow. While this approach could work, it is prudent to obtain imaging of the TDC (cathetergram) to confirm its position and integrity. Here we show radiographic images of a right internal jugular TDC appropriately placed with the tip in the right atrium (Figure 1). Within two weeks, the patient developed poor blood flows on dialysis associated with intermittent arrhythmias. A Computed Tomography (CT) scan, done earlier that day to rule out pulmonary embolus, showed that the TDC had migrated medially (in wards) with the tip now positioned within the right ventricle (Figure 2). The TDC was exchanged, which resulted in the resolution of arrhythmias and excellent

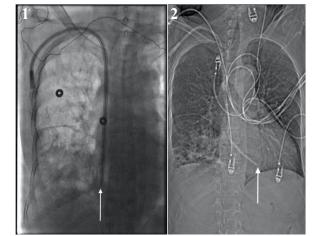


Figure 1: TDC at the time of insertion with the tip appropriately located in the right atrium.

Figure 2: CT-scan imaging showing the TDC after it migrated medially with the tip in the right ventricle. **Citation:** Doraiswamy M, Boubes K, Haddad N, Agarwal A. Malfunctioning tunneled dialysis catheter associated with arrhythmias. J Clin Images Med Case Rep. 2023; 4(2): 2304.

blood flow on dialysis. While medial migration of TDCs is rare, this case illustrates its possibility and the importance of imaging in evaluating TDC related complications. Failure to identify the cause of malfunction in this case not only would not have improved the blood flow, but moreover, could have resulted in serious complications such as arrhythmias, right ventricular rupture, or sudden cardiac death. Choosing proper length of TDC and location of exit site at the time of insertion is also important to prevent accidental migration into the right ventricle.

Declarations

Conflicts of interest: None.

Competing interests statement: The authors declare no conflicts of interest nor involved in promoting the therapies involved in the abstract.

Data sharing statement: Extra data is available by emailing corresponding author.

Acknowledgement: Not applicable.

Patient and public involvement statement: Patient accepted for publication. Public statement not applicable.

Cohort profile: Not applicable.

Funding disclosure: This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors. The authors declare no funding was received for this study.

Authors contributorship statement:

KB identified the case and helped in writing case presentation

MD, KB, AA and NH authored the manuscript

MD submitted the abstract to the Journal.

MD and KB helped in revision of the submission.

References

- Fiaccadori E, Gonzi G, Zambrelli P, Tortorella G. Cardiac arrhythmias during central venous catheter procedures in acute renal failure: A prospective study. J Am Soc Nephrol. 1996; 7: 1079-84.
- Agarwal AK, Haddad N, Boubes K. Avoiding problems in tunneled dialysis catheter placement. Semin Dial. 2019; 32: 535-540.
- Moist L, Vachharajani T. Vascular access for hemodialysis. Nissenson AR, Fine RN, eds. Handbook of Dialysis Therapy. 5th ed. Philadelphia, PA: Elsevier; 2016: 40-44.