Scholars Journal of Medical Case Reports
Abbreviated Key Title: Sch J Med Case Rep
ISSN 2347-9507 (Print) | ISSN 2347-6559 (Online)
Journal homepage: https://saspublishers.com

OPEN ACCESS

Cardiology

Migration of the JJ Lead into the Right Ventricle: A Case Report from Mali

Dr. Modibo Doumbia[1*], Baba Ibrahima Diarra[1], Mamadou Toure[2,3], Karamoko Djiguiba[2], Tidiani K Bagayoko[2], Alkadri Diarra[2], Souleymane Coulibaly[2], Salia Traore[1], Siriman Koita[1], Birama Togola[3], Honore J G Berthé[1,3], Bréhima Coulibaly[1,3], Sadio Yena[3]

[1]Andre Festoc Center, Mother-Child Hospital Luxembourg, Mali
[2]Department of Cardiology, Mother-Child Hospital Luxembourg Bamako, Mali
[3]Faculty of Medicine and Odontostomatology, University of Technical Sciences and Technologies of Bamako, Mali

DOI: 10.36347/sjmcr.2023.v11i06.017 | **Received:** 28.04.2023 | **Accepted:** 01.06.2023 | **Published:** 09.06.2023

***Corresponding author:** Dr. Modibo Doumbia
Andre Festoc Center, Mother-Child Hospital Luxembourg, Mali

Abstract **Case Report**

The authors report a case of JJ lead migration into the right ventricle during conventional junction syndrome surgery in a 21-year-old African woman living in Bamako (Mali). This complication of JJ lead migration into the right ventricle is rare in the literature, hence the first time it constitutes a thrombogenic factor and exposes the patient to a high morbi-mortality.

Keywords: Migration, JJ lead, right ventricle, Mali.

1- INTRODUCTION

The double J or "JJ" catheter is a self-static internal catheter placed endoscopically between the kidney and the bladder, allowing urine to flow freely and removing an obstruction in the ureter. The catheter is tubular and perforated with numerous holes to allow urine to pass through [1]. This flexible plastic catheter (polyurethane or silicone) has curves at both ends, enabling it to be held between the kidney cavities (upper end) and the bladder (lower end) [2]. Treatment of kidney or ureter stones is the most frequent indication for this catheter (risk of obstructive renal failure or pyelonephritis); the JJ catheter avoids this blockage and dilates the ureter, facilitating removal of stone fragments [4]. Complications such as infections, catheter rupture and upward migration of the lower urinary tract are described in the literature. No case of JJ catheter migration into the right ventricle has been described in recent literature, hence this case report to elucidate the mechanism of migration and review the literature.

2- OBSERVATION

A Y, aged 21, with no known medical or surgical history, was admitted for management of an intracardiac foreign body. Questioning revealed that he had recently undergone urological surgery for a junction syndrome at a health facility in Bamako. During this operation, he had a double JJ catheter inserted between the kidney and the bladder, according to the urologist. At the 3rd month check-up, the catheter was not in place. On admission, the physical examination revealed good general condition with coloured conjunctivae and no peripheral signs of cardiac congestion. The heart sounds were regular and free of additional noises. The abdomen was soft with no palpable mass and a thin right lumbotomy scar. The rest of the examination was unremarkable. Thoracic angioscan revealed a radiopaque foreign body in the inferior vein extending into the pulmonary trunk (fig. 1), with no parenchymal or intracardiac lesions. Cardiac and laboratory tests were normal. He decided to extract the JJ catheter after a medical-surgical endo-vascular staff. Owing to a lack of suitable equipment, he underwent an endovascular extraction outside Mali, the postoperative course of which was straightforward. The evolution was favorable and he was seen again at 3 months post-operatively.

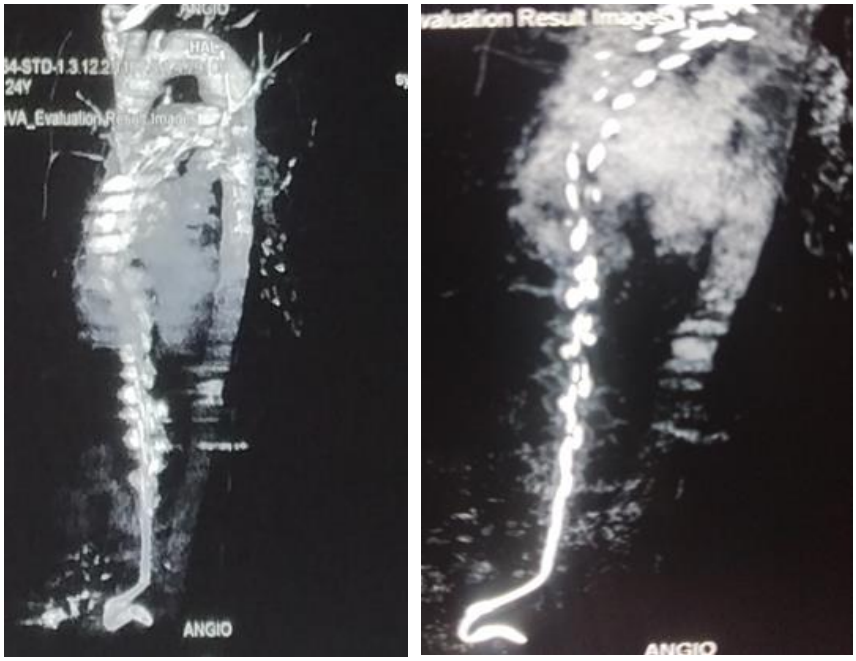

Fig. 1: JJ probe migration in the right ventricle

3- DISCUSSION

Gibbons initially addressed the problem of downward migration of soft silicone tubes by adding barbs along the tube axis, a stent that bears his name [5]. All currently available, fully internalized stents combat migration with the presence of a proximal and distal J or pigtail. Nevertheless, peristalsis can release a stent (particularly one constructed from softer materials) from the ureter. Migration of the JJ catheter into the right ventricle is very rare in the literature, hence the first attempt to explain this dreaded complication, which is a thrombogenic factor. The standard technique of retrograde endoscopic JJ lead insertion is recommended [5, 6]. In our case, the patient was operated on for a junction syndrome by conventional surgery under general anaesthesia requiring the insertion of a JJ catheter, but due to a lack of experience on the part of the urological surgeon's practitioner, iatrogenesis was produced by effraction of the renal vein. Migration can be explained by the suction mechanism of the body's vena cava system, and is becoming a rare complication of JJ catheter insertion. This is the first time we have noted such a complication, which constitutes a thrombogenic factor. This extraction can be performed endovascularly or by conventional surgery. We opted for the endovascular route, but due to a lack of technical resources, the patient was referred abroad for better management. This technique is the most practical and widely used for the extraction of foreign bodies, as in our case.

CONCLUSION

The insertion of a JJ catheter is considered a trivial procedure in endourology, but can be the source of a serious complication. It must be performed under scopy to reduce the risks. This case of migration into the ventricle is considered the first of its kind in the literature.

REFERENCES

1. De Petriconi, R., & Zores, T. (2014). Dérivation du haut appareil urinaire par sonde urétérale, double J, néphrostomie ou pontage interne. Principes, techniques et complications. *EMC Tech Chir Urol*, *7*(3), 41-140.
2. Finney, R. P. (1978). Experience with new double J ureteral catheter stent. *The Journal of urology*, *120*(6), 678-681.
3. Pansota, M. S., Rasool, M., Saleem, M. S., & Tabassum, S. A. (2013). Indications et complications de l'endoprothèse urétérale double J: notre expérience. 11(1), 8-12.
4. Mosharafa, A. A., Abelrasoul, M. A., Abdelaziz, A. Y., Fouda, W. B., Fawzi, K., & Fayyad, A. (2018). Forgotten ureteral stents: Facteurs de risque, complications et prise en charge. 24(1), 28-33.
5. El-Faqih, S. R., Shamsuddin, A. B., Chakrabarti, A., Atassi, R., Kardar, A. H., Osman, M. K., & Husain, I. (1991). Polyurethane internal ureteral stents in treatment of stone patients: morbidity related to indwelling times. *The Journal of urology*, *146*(6), 1487-1491.
6. Richter, S., Ringel, A., Shalev, M., & Nissenkorn, I. (2000). The indwelling ureteric stent: a 'friendly' procedure with unfriendly high morbidity. *BJU international*, *85*(4), 408-411.