

Novel Exchange Technique Of Encrusted Nephrostomy Catheter

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Purpose of study:

Percutaneous nephrostomy is mainly performed when there is outflow obstruction from the kidneys, the usual causes being stricture, stone or tumour. Infrequently, it is also done to divert urine in cases of ureteric fistula or leak.

Patients that require long-term indwelling nephrostomy catheter require regular catheter exchange to prevent stone encrustation within and along the catheter. In most cases, the exchange can be done over guidewire. Rarely, encrustation occurs within the catheter making over guidewire exchange technique impossible. This report describes a novel technique in cases when basic over guidewire exchange technique has failed.

Material and method:

Patient is placed in the prone position and the procedure is done under aseptic technique. A 3/0 non-absorbable suture is threaded across the two walls of the catheter at about 3cm-5cm from the skin insertion site. The suture needle is then removed to prevent injury. The catheter is then cut just distal to the suture. Both ends of the suture are then threaded through the distal lumen of a sheath to exit through the septum of the sheath. The sheath should be about 2Fr larger than the catheter. The septum can be trimmed with a scalpel if it is non-removable to allow the suture to pass through. The sheath is advanced until the renal collecting system using the old catheter as a guidewire. Generous analgesia should be given at this point as patient would experience severe pain. The old catheter can be removed. A guidewire is inserted through the sheath, the sheath is removed and a new catheter can be inserted.

Result and Conclusion

This novel technique is simple and can be carried out with basic instruments readily available in the angiographic suite for exchange of encrusted nephrostomy catheter.