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VISCERAL SURGERY VIDEOS

Implantable venous access device placement (IVAD) using the cephalic vein (with video)



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Available online 24 September 2018

The placement of implantable central venous access devices is one of the first surgical procedure performed by junior residents in digestive surgery. However, despite well described theoretical operative techniques, there is no available video showing how to perform this simple but important surgical procedure. Implantable venous access devices allows for repeated access to the central venous system and administration of medications as chemotherapies in patients with cancer. The number of patients requiring long-term treatment, such as chemotherapy, antibiotic therapy, antiviral treatment, blood transfusion, analgesic treatment or total parenteral nutrition, is increasing regularly. These patients need reliable central venous access, easy to maintain for the care team and comfortable for the patient. The aim of a central venous access device is to deliver potentially endothelium damaging medications directly into a large vein with high blood flow, in order to maximize dilution and minimize endothelium damage. The venous junction of the basal veins with the right heart is one location corresponding to this condition. During the 1970s, the introduction of central tunnel venous catheters greatly improved the care of the chronically ill patients [1,2]. However, the use of those catheters was burdened with septic and thrombotic complications. Fully implantable central venous access devices (DAVCI) were first described in 1982 and markedly improved the management of patients with chronic intravenous therapy [3]. The purpose of this video is to show a simple, reproducible, and reliable technique for central venous access device implantation. This simple venous access to the superior vena cava system is performed under local anesthesia and compatible with an ambulatory setting. This video is useful for all surgeons having to perform a central venous access device implantation and describes important steps to follow for a successful implantation (Figs. 1–4).

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Figure 1.



Figure 2.



Figure 3.



Figure 4.

Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at <https://doi.org/10.1016/j.jviscsurg.2018.09.003>.

Disclosure of interest

The authors declare that they have no competing interest.

References

- [1] Broviac JW, Cole JJ, Scribner BH. A silicone rubber atrial catheter for prolonged parenteral alimentation. *Surg Gynecol Obstet* 1973;136(4):602–6.
- [2] Hickman RO, Buckner CD, Clift RA, et al. A modified right atrial catheter for access to the venous system in marrow transplant recipients. *Surg Gynecol Obstet* 1979;148(6):871–5.
- [3] Niederhuber JE, Ensminger W, Gyves JW, et al. Totally implanted venous and arterial access system to replace external catheters in cancer treatment. *Surgery* 1982;92(4):706–12.