O65: VIDEO-ASSISTED ARTERIOVENOUS FISTULA IN DIALYSIS
PATIENTS: OUR PRELIMINARY EXPERIENCE WITH VITOM® HD
SYSTEM

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1. Introduction

Arteriovenous fistulae (AVF) constructed using native vessels, vascular grafts and central
venous catheters are the best permanent access, owing to a lower incidence of stenosis,
thrombosis and infection. [1] The radiocephalic AVF of Cimino-Brescia remains the first choice
for vascular access. [2,3] Minimally invasive access with a packaging of anastomoses is difficult in a
restricted surgical field and traditional micro-dissection requires using the oculars of a stereo
or surgical microscope for visualization. [4] Loupes with 2.5–4.5 magnification are most
frequently used, but also the operating microscope may be used. [5] Although these
magnifying instruments are essential to the optimal care of patients, they often come at a
detriment to the operating surgeon in the form of neck or back pain and fatigue. VITOM® HD
System can be a valid alternative to the others magnifying instruments (Fig. 1).

![Figure 1: First experience of using VITOM® HD 3D System in an experimental model.](image)

2. Methods

We performed a video-assisted radio-cephalic arteriovenous fistula in latero-lateral using
prolene 7-0 without loupes (Fig. 2). The patient was a 72 years old man with history of
Diabetes Mellitus type II from 15 years, ischaemic cardiomyopathy from 5 years and renal
failure from 2 months. He needed a vascular access to start the substitutive haemodialysis
treatment 30 days later. The VITOM® HD 3D System used is a KARL STORZ optical instrument
coupled with a 1080p full high definition camera system.

3. Results

The average time for packing anastomoses was $46 \pm 15$ minutes; No complications were noted
after decay, anastomoses showed a perfect holding. The consensus opinion of the entire group
was that image quality was excellent and the system is ergonomic. The surgeons agreed that
neck strain
and fatigue were reduced.

Figure 2: Arteriovenous video-assisted fistula creation using prolene 7-0 and microscopically instruments.

4. Discussion & Conclusion

The arteriovenous fistula creation is a safe and easy-to-realize technique but provides a long training for surgeons who have no experience in microscopically surgery. This technique is particularly suitable for the formation of young surgeons as the images of the operating field are magnificent, enlarged and high-definite on-screen visible to everyone. Thanks to its own features loupes are not necessary.

References