Robotic Vascular Surgery- Petr Stadler

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Objectives:

The da Vinci system has been used by a variety of disciplines for laparoscopic procedures but the use of robots in vascular surgery is still relatively unknown. The feasibility of laparoscopic aortic surgery with robotic assistance has been sufficiently demonstrated. Our clinical experience with robotassisted vascular surgery performed using the da Vinci system is herein described.

Methods:

Between November 2005 and September 2018, we performed 437 robot-assisted vascular procedures. 291 patients were prospectively evaluated for occlusive diseases, 111 patients for abdominal aortic aneurysm, 5 for a common iliac artery aneurysm, 9 for a splenic artery aneurysm, 1 for internal mammary artery aneurysm, 8 for median arcuate ligament re-lease, 8 for endoleak type II treatment post EVAR, 2 for renal artery reconstruction and two cases were inoperable. 5 hybrid procedures in study were performed.

Results:

417 cases (96%) were successfully completed robotically, 1 patient's surgery (0.25%) was discontinued during laparoscopy due to heavy aortic calcification. In 16 patients (3.7%) conversion was necessary. The thirty-day mortality rate was 0.5% (2 patients), and early non-lethal postoperative complications were observed in 7 patients (1.6%).

Conclusions:

Our experience with robot-assisted laparoscopic surgery has demonstrated the feasibility of this technique for occlusive diseases, aneurysms, endoleak II treatment post EVAR, for median arcuate ligament release and hybrid procedures.

Recent Publications:

1. Stadler P, Dvoracek L, Vitasek P and Matous P (2016) Robot assisted aortic and non-aortic vascular operations. Eur J Vasc Endovasc Surg. 52(1):22-8.

Note: This work was presented in World Congress & Exhibition on Vascular Surgery which was scheduled in March 28-29, 2019 Rome, Italy

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