The Da Vinci Robot Facilitates Laparoscopic Aorto-Femoral Bypass: Will It Displace Endovascular Techniques?

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Disclosure
Speaker name: Jean-Marc ALSAC
I do not have any potential conflict of interest

Laparoscopic aortic surgery
Occlusive & Aneurysmal disease
Expected benefits vs Laparotomy
- Faster laxation
- Earlier rehabilitation
- Shorter hospitalisation stay
- Less parietal complication
Expected benefits vs Endovascular
- Improved long term patency

Limitations
- 2D vision
- No flexibility
- Leverage
- Shaking
- Fatigability

Robotic aortic surgery
Aorto-iliac occlusive disease
- February 2014 to November 2015
- 31 Aorto-bifemoral bypasses
- 24 male / 56 ± 5 yo
- Tasc C = 10 / Tasc D = 21
Robotic aortic surgery

Learning curve

- Docking = 8 min (5 to 12)
- Clamping = 62 min (40 to 89)
- Anastomosis = 37 min (25 to 55)
- Procedure = 230 min (160 to 310)

2 conversions to OS
1 colonic ischemia
In-hospital mortality = 3.2%
Median Hospital stay = 7 (4 to 17)
Robotic aortic surgery

Learning curve

- 2 conversions to OS
- 1 colonic ischemia
- In-hospital mortality = 3.2%
- Median Hospital stay = 7 (4 to 17)
- Cost effective (case control study)

Robotic aortic surgery

Will it displace endovascular techniques?

Prospective Randomized Study
- 125 patients / 168 iliac arteries
- 83 covered / 85 bare BX stents

OR is still the gold standard for TASC C & D lesions in good risk patients
Robotic aortic surgery

Conclusions
- Feasible and reproducible
- No major learning curve
- Cost effective
- For high risk patients with Tasc C & D
- Replace Open aorto-femoral bypasses

Thank you for your attention