Real-Time Trans-Rectal Ultrasound-Guided Robot-Assisted Trans-Perineal Radical Prostatectomy: A pre-clinical experience using the SP® surgical system Riccardo Bertolo, Juan Garisto, Mohamed Eltemamy and Jihad Kaouk

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ID: 40



Introduction

The advent of single-port robotic surgery prompted the rediscovery of the trans-perineal access for prostatectomy. The approach is promising given the possibility to avoid the abdominal cavity and minimize the surgical dissection.



Trans-perineal prostatectomy represents a challenging surgery: the achievement of the right plane for an anatomical dissection can be tricky!

Aim

- To test the feasibility of the TRUS-guided approach
- To evaluate the eventual benefits of the image-guidance during the surgery.

Results

- Pure single-site trans-perineal robotic prostatectomy was successfully performed by using the da Vinci SP® surgical system.
- Real-time TRUS-guidance helped in delineating the prostate boundaries. Particularly, the prostate apex was promptly identified.





Conclusions

We demonstrated the feasibility of real-time TRUS-guided pure single-site trans-perineal robotic radical prostatectomy performed by the da Vinci SP® surgical system.

The use of TRUS-guidance could reduce the challenges related with the approach and open the doors to such indication.

