

VE02 Comparing the differences in the radical prostatectomy technique using the da Vinci Xi and da Vinci single port

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Introduction & Objectives: The da Vinci Single Port (SP) application in urologic procedures is recent in the literature. Several groups described the use of this new technology in different types of surgery. However, the comparison between the SP robot and its antecessors, such as the Xi, is still unclear. This video aims to describe a side-by-side comparison between the da Vinci Xi and SP approach to radical prostatectomy (RP).

Materials & Methods: We performed a side-by-side video compilation illustrating the differences between the SP and Xi techniques in key points of a robotic-assisted radical prostatectomy. The video was divided into ten different steps since the trocar placement until the anastomosis.

Results: The trocar placement is the first difference between both robots. While in the Xi we use six ports, in our SP technique, only two ports are placed. We illustrated the relocation pedal application during the SP access to different surgical sites. During the bladder dropping, the necessary traction is performed with the Prograsp in the Xi and with the Cadiere in the SP. We use the same technique concept to approach the bladder neck and seminal vesicles (SV). However, with the SP console, we do not have the same traction provided by the Xi instruments. The posterior prostate dissection is another difference because, with the Xi, we use the 30 degrees lens toggled (looking up), while with the SP, we perform the necessary deflection between the Denonvilliers layers. Also, the lateral prostate dissection and apical access are performed with the same technique in both robots. After the urethra division, the posterior reconstruction and anastomosis are performed with barbed suture. Finally, another difference is noted in the suturing step because the SP has less angulation and amplitude due to the lack of wrist-like articulations founded in the Xi.

Conclusions: In this video compilation, we compared side-by-side the crucial steps of a radical prostatectomy performed with the Xi and SP consoles. In our experience, we maintained the assistant trocar in the SP approach to avoid modifying or adapting our established technique performed with the multiport console. The surgical technique concept is the same with both consoles. However, the SP has a new learning curve in terms of port placement, multiple scope deflections, relocation pedal applications, lower traction strength, and different suturing angles.