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LETTER TO THE EDITOR

Total abdominal proctocolectomy: what is new with the da Vinci Xi?

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To the Editor:

We read with great interest the recently published article by Rodriguez et al. entitled "Use of the Xi robotic platform for total abdominal colectomy: a step forward in minimally invasive colorectal surgery" [1].

Although possible benefits regarding the use of robotic assistance in performing a total colectomy have been already reported with the da Vinci Si, until now the main limits to the widespread of this technique in this field were low versatility, long operative times and high costs.

To overcome some of these limitations, we previously reported a possible application of robotic technology in total proctocolectomy for familial adenomatous polyposis or severe ulcerative colitis, describing a hybrid laparoscopic/robotic technique with da Vinci Si, capable of saving time with respect to the multiple docking techniques and simultaneously maintaining the advantages of the robot in the pelvic phase [2]. In line with other published results with the da Vinci Si on rectal surgery [3–5], we reported very good functional outcomes with this technique also in proctocolectomies with ileal pouch anal anastomosis. However, we acknowledge that the simultaneous use of both laparoscopic and robotic devices is still costly (paradoxically more than robotic alone), and has the disadvantage of losing benefits coming from the full use of the robotic technology.

As the advent of da Vinci Xi® in clinical practice has overpassed several limits of the previous version, thanks to the functionality of a boom-mounted system combined with the greater flexibility of the robotic arms, we completely agree with the authors that its use in total abdominal proctocolectomy could represent a good application, and could find more spread. The very good results reported by the authors are in line with those of our previously published articles on rectal surgery, and on multiquadrant robotic surgery [6, 7]. Indeed, although not specifically applied to total proctocolectomy, we reported significantly shorter docking and operative time during rectal resection for cancer if performed with the Xi versus the Si, as well as significantly higher rates of fully robotic approach, also avoiding the need of hybrid phases and higher percentage of complete mobilization of splenic flexure [6–8]. Furthermore, we used the da Vinci Xi in several multiple-organ resections, with very satisfactory results.

Thus, we completely agree with the authors about the capability of the da Vinci Xi to enhance the surgical workflow, and the possibility to obtain similar operative times and even better clinical results with respect to standard laparoscopy. We think that a further improvement of these promising results can be obtained by adding to the described technique the use of the da Vinci Table Motion (dVTM). Indeed, in our experience, the dVTM allows to further increase the flexibility of the robotic system, providing access to different parts of the anatomy even faster and more efficiently with respect to the da Vinci Xi alone [9]. The da Vinci Xi plus the new operating table enables the surgeon to optimize gravity exposure and provides quick access to different surgical targets, bringing advantages in terms of operative time and indirectly of personnel costs.

In conclusion, because we also observed a significant reduction of costs with increasing robotic experience and changing from the Si to the Xi version [10], we think that the da Vinci Xi plus dVTM in performing total proctocolectomies could represent a combination capable of increasing versatility, further reducing operative time and costs, and promoting the dissemination of this application. Comparative studies are strongly suggested to draw definitive conclusions.

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Compliance with ethical standards

Conflict of interest Simone Guadagni, Gregorio di Franco, Matteo Palmeri, Niccolò Furbetta, Desireè Gianardi and Luca Morelli declare that they have no conflict of interest.

Ethical approval This article does not contain any studies with human participants or animals performed by any of the authors.

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