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Editorial

Laparoscopic Surgery of the Abdominal Wall: Why Has It Not Been Implemented Like Other Laparoscopic Procedures?☆



Cirugía laparoscópica de la pared abdominal: ¿por qué no se ha implementado como otros procedimientos laparoscópicos?

CIRUGÍA ESPAÑOLA has recently published an article by the Endoscopic Surgery Group of the Spanish Association of Surgeons (AEC), which has analyzed the 25 years since the introduction of laparoscopic surgery in Spain.¹ One of the main conclusions of the article is that, despite the advantages of laparoscopy, its implementation and consolidation in this country has not been homogeneous, especially in advanced laparoscopic techniques.

Laparoscopic abdominal wall surgery is a clear example. In recent years, laparoscopic techniques have demonstrated potential advantages in the treatment of inguinal hernias, and several studies have demonstrated them to be ideal in bilateral and recurrent hernia subgroups.²⁻⁷ Therefore, several medical associations and clinical guidelines recommend laparoscopy as the initial option for surgical treatment.⁸⁻¹⁰ Moreno-Sanz et al.,¹ however, report that 64% of Spanish surgeons never use endoscopic surgery for inguinal hernia repair, 30% do so occasionally, and only 6% do so frequently. These percentages contrast notably with published reports from the United States and Europe, where French and German registries show that laparoscopic hernioplasty is used in 25%–28% of cases, while rates in Denmark, Netherlands, United Kingdom and Italy are 15%–18%. Moreover, some of these countries report the use of laparoscopic hernioplasty in more than 40% of bilateral and recurrent hernia procedures.^{9,11,12}

In the case of incisional hernias, the same study shows that the results in Spain are also not very promising: the use of laparoscopy is routine in 10%, selective in 49%, and never even contemplated in 41%.¹ These results are very similar to those reported by the same group in another survey from 2003,¹³ which confirms that this technique has not been widely accepted in our setting. Similar rates have been compiled in

the National Registry of Incisional Hernias (Spanish acronym, EVEREG) sponsored by the AEC: with nearly 3000 registered cases, only 12.8% of the repairs were laparoscopic.¹⁴ Meanwhile, if we analyze what happens in other countries, 2 studies have reported that laparoscopic repair is done in the U.S. in 26%–28%.^{15,16} The Danish registry reported a laparoscopic repair rate of 54% and a recurrence rate that was lower than in open surgical repairs; they concluded that the laparoscopic approach provides patient benefits while also being cost-effective.^{17,18}

Why are there differences between the recommendations made in clinical guidelines and everyday clinical practice? There are several reasons that contribute in one way or another to this anomalous situation: our unwillingness to learn a new procedure with a demanding learning curve; the lack of training of most surgeons in the open pre-peritoneal approach for inguinal hernias; higher costs, especially if single-use products are utilized; and, basically, the peculiarities of our healthcare system, which treats hernias as an unimportant pathology in our surgical programs and favors the quantity of procedures over quality.

What has been done in the US and other European countries to motivate the implementation of laparoscopic abdominal wall surgery? Basically, it comes down to training. In most of these countries, training in laparoscopic abdominal wall surgery has been included in resident training programs. Particular emphasis is given to acquiring necessary laparoscopic technical skills as well as adequate understanding of the wall anatomy when using this approach, which is different to what residents are familiar with in open surgery.^{12,19,20}

To this end, simulators have been shown to be very useful in improving laparoscopic skills, especially among the latest

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“Nintendo generation” of young surgeons and their ease in handling computer games.^{12,19} The use of simulators minimizes the learning curve, does not require constant supervision as it is not performed on actual patients, and it optimizes the use of operating rooms.

What should be done to improve this situation in our country? We have a lot of work to do, and several factors must be dealt with:

1. The main reason for not using laparoscopic hernia repair continues to be lack of proper training.⁹ Theoretical-practical courses are necessary, along with initial supervision by expert surgeons. This has been shown to be the best way to reduce learning time and to facilitate the reproducibility and complete command of the technique.¹⁹
2. Sufficient practice. As we have seen in other countries, laparoscopic abdominal wall surgery must be included in residency programs. This also requires the support of scientific societies and the medical industry, as well as the creation of reference centers for training and practicing new laparoscopic skills. The Abdominal Wall Group of the AEC has created the Annual Course for Residents at the Hospital de Getafe. Meanwhile, this same group is creating the Network of Schools for Abdominal Wall Surgery and Research (in Spanish, *RECIPE*), which will meet the skill development and training needs of young surgeons for this type of surgery.
3. In order to change the perception of hernias as being a less important part of surgical programs, the quality of repairs should be given preference over the number of repairs. The best case scenario would be if each hospital, depending on the case volume, had specialized abdominal wall surgery units or specialized surgeons that would be able to provide the most appropriate solution for each individual. These solutions would be in accordance with the recommendations of scientific societies and clinical guidelines.

In Spain, laparoscopic abdominal wall surgery is used less frequently than what is considered standard in other countries. Perhaps now is the time to take a step back and improve training in abdominal wall surgery.²⁰ A conscious effort is necessary, both individually as well as institutionally. We need to adapt to the times and improve this current situation, which benefits neither our patients nor ourselves as surgeons.

REFERENCES

1. Moreno-Sanz C, Tenías-Burillo JM, Morales-Conde S, Balagué-Ponz C, Díaz-Luis H, Enriquez-Valens P, et al. 25 años de cirugía laparoscópica en España. *Cir Esp*. 2014;92:232-9.
2. Torralba-Martínez JA, Moreno-Egea A, Liron-Ruiz R, Alarte-Garvi JM, Morales-Cuenca G, Miguel-Perello J, et al. Bilateral inguinal hernia: open surgery versus extraperitoneal laparoscopic repair. *Cir Esp*. 2003;73:282-7.
3. Wauschkuhn CA, Schwarz J, Boekeler U, Bittner R. Laparoscopic inguinal hernia repair: gold standard in bilateral hernia repair? Results of more than 2800 patients in comparison to literature. *Surg Endosc*. 2010;24:3026-30.
4. Feliu X, Clavería R, Besora P, Camps J, Fernández-Sallent E, Viñas X, et al. Bilateral inguinal hernia repair: laparoscopic or open approach? *Hernia*. 2011;15:15-8.
5. Bay-Nielsen M, Kehlet H, Strand L, Malmstrom J, Andersen FH, Wara P, et al. Quality assessment of 26,304 herniorrhaphies in Denmark: a prospective nationwide study. *Lancet*. 2001;358:1124-8.
6. Feliu X, Jaurrieta E, Viñas X, Macarulla E, Abad JM, Fernández-Sallent E. Recurrent inguinal hernia: a ten-year review. *J Laparoendosc Adv Surg Tech A*. 2004;14:362-7.
7. Dedemadi G, Sgourakis G, Karaliotas C, Christofides T, Kouraklis G, Karaliotas C. Comparison of laparoscopic and open tension-free repair of recurrent inguinal hernias: a prospective randomized study. *Surg Endosc*. 2006;20:1099-104.
8. National Institute for Clinical Excellence (NICE). Laparoscopic surgery for inguinal hernia repair. Technology Appraisal Guidance No. 83; September 2004. p. 1-33.
9. Shaikh I, Olabi B, Wong VM, Nixon SJ, Kumar S. NICE guidance and current practice of recurrent and bilateral groin hernia repair by Scottish surgeons. *Hernia*. 2011;15:387-91.
10. Simons MP, Aufenacker T, Bay-Nielsen M, Bouillot JL, Campanelli G, Conze J, et al. European Hernia Society guidelines on the treatment of inguinal hernia in adult patients. *Hernia*. 2009;13:343-403.
11. de Lange DH, Kreeft M, van Ramshorst GH, Aufenacker TJ, Rauwerda JA, Simons MP. Inguinal hernia surgery in the Netherlands: are patients treated according to the guidelines? *Hernia*. 2010;14:143-8.
12. Rosenberg J, Bay-Nielsen M. Current status of laparoscopic inguinal hernia repair in Denmark. *Hernia*. 2008;12:583-7.
13. Feliu X, Targarona EM, García A, Pey A, Carrillo A, Lacy AM, et al. La cirugía laparoscópica en España. Resultados de la encuesta nacional de la Sección de Cirugía Endoscópica de la Asociación Española de Cirujanos. *CirEsp*. 2003;74:164-70.
14. Hernández-Granados P, Pereira JA, Feliu X, López-Cano M, Fernández F, Delgado I. Spanish Incisional Hernia Register Group. Spanish register of incisional hernia. Preliminary results after 1 year of implementation. *Hernia*. 2014;18 Suppl. 2:31.
15. Colavita PD, Tsirlina VB, Walters AL, Lincourt AE, Belyansky I, Heniford BT. Laparoscopic versus open hernia repair: outcomes and sociodemographic utilization results from the nationwide inpatient sample. *Surg Endosc*. 2012;27:109-17.
16. Funk LM, Perry KA, Narula VK, Mikami DJ, Melvin WS. Current national practice patterns for inpatient management of ventral abdominal wall hernia in the United States. *Surg Endosc*. 2013;27:4104-12.
17. Helgstrand F, Rosenberg J, Kehlet H, Jorgensen LN, Bisgaard T. Nationwide prospective study of outcomes after elective incisional hernia repair. *J Am Coll Surg*. 2013;216:217-28.
18. Bittner R, Bingener-Casey J, Dietz U, Fabian M, Ferzli GS, Fortelny RH, et al. Guidelines for laparoscopic treatment of ventral and incisional abdominal wall hernias (International Endohernia Society (IEHS)-part 1. *Surg Endosc*. 2014;28:2-29.
19. Wilkiemeyer M, Pappas TN, Giobbie-Hurder A, Itani KM, Jonasson O, Neumayer LA. Does resident post graduate year influence the outcomes of inguinal hernia repair? *Ann Surg*. 2005;241:879-82 [discussion 882-884].
20. McCoy AC, Gasevic E, Szlabick RE, Sahmoun AE, Sticca RP. Are open abdominal procedures a thing of the past? An

analysis of graduating general surgery residents' case logs from 2000 to 2011. *J Surg Educ.* 2013;70:683-9.

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¹The author of this editorial died during production of the article.

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