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Editorial

LESS: An Acronym Searching for a Home

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Laparoendoscopic single-site (LESS) or single-port surgery was recently developed as an extension of standard laparoscopy with the ostensible goals of minimized patient discomfort, shortened convalescence, and improved cosmesis [1]. These benefits are realized by placing all surgical instruments inline through a readily concealed 2-cm incision. Delivered through a variety of configurations, LESS affords the surgeon ready accessibility to the peritoneal cavity or retroperitoneal space with a modicum of patient-reported discomfort and scarring. With the development of purpose-built instrumentation that has minimized many of its initial ergonomic barriers, LESS has become more accessible and more pragmatic [2]. Consequently, there has been exponential growth in its application and, with it, the veritable litany of arbitrary nomenclature and capricious acronyms. Such inconsistencies have led to a "battle of acronyms" within and outside of our field and, unfortunately, have engendered questions regarding the true benefits of LESS [3].

Without question, uniformity and standardization of terminology are of the utmost importance within the surgical disciplines, especially as applied to reporting and interpreting data [4–9]. Such a regimented approach develops clarity and affords benchmarks by which outcomes may be judged. An excellent example of this philosophical approach is the dissemination of the Clavien classification system in the reporting of surgical complications [10,11]. Not only have these criteria permeated our literature, but many of the certifying bodies within urology have also advocated them.

In an attempt to bring a similar level of clarity to the subject of LESS, the newly formed NOTES Working Group of the Endourological Society set forth specific nomenclature with the explicit goal of ending this semantic controversy and promoting unambiguous and exacting communication [12]. This same verbiage was subsequently endorsed by the Laparoendoscopic Single-Site Surgery Consortium for Assessment and Research, which was likewise formed to serve as an international multidisciplinary ad hoc organization with the goal of advancing the surgical field [13]. These collective consensus documents endorsed the term *laparoendoscopic single-site surgery* (LESS) and defined LESS as "any minimally invasive surgical procedure that is performed through a single incision/location, using conventional laparoscopic or newly emerging instrumentation," adding that "it does not distinguish between a single laparoscopic port, multiple laparoscopic ports, or a single multi-port platform." Finally, it does not exclude "any procedure that requires enlargement of the access site for specimen extraction or removal."

It has been 3 years since the publication of these consensus statements, and it remains unclear how consistently their recommendations have been applied. The perceived unanimity within urology has not had a favorable impact on our colleagues within gynecology and/or general surgery in which many disparate terms continue to be used. To address this intriguing issue, we performed a simple bibliometric exercise. We conducted a literature search using the PubMed search engine and considered two time frames: before and after the publication of the nomenclature paper in November 2008 [12]. Similar to the procedure followed by Box and colleagues, we searched myriad acronyms including, but not limited to, LESS (laparoendoscopic single-site surgery), SPA (single-port access), SILS (single-incision laparoscopic surgery), OPUS (one-port umbilical surgery), SPL (single-port laparoscopy), ENOTES (embryonic natural orifice transluminal endoscopic surgery), UNOTES (umbilical natural orifice transluminal

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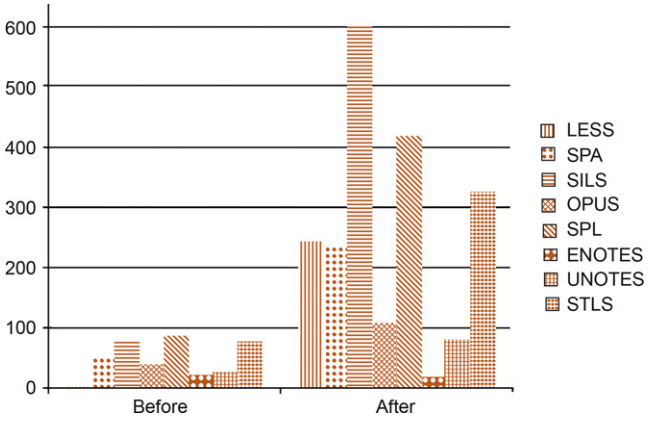

Fig. 1 – Number of PubMed hits by using different keywords before (January 2006–October 2008) and after (November 2008–July 2011) the publication of nomenclature on LESS and NOTES [12].
LESS = laparoendoscopic single-site surgery; SPA = single-port access; SILS = single-incision laparoscopic surgery; OPUS = one-port umbilical surgery; SPL = single-port laparoscopy; ENOTES = embryonic natural orifice transluminal endoscopic surgery; UNOTES = umbilical natural orifice transluminal endoscopic surgery; STLS = single-trocar laparoscopic surgery.

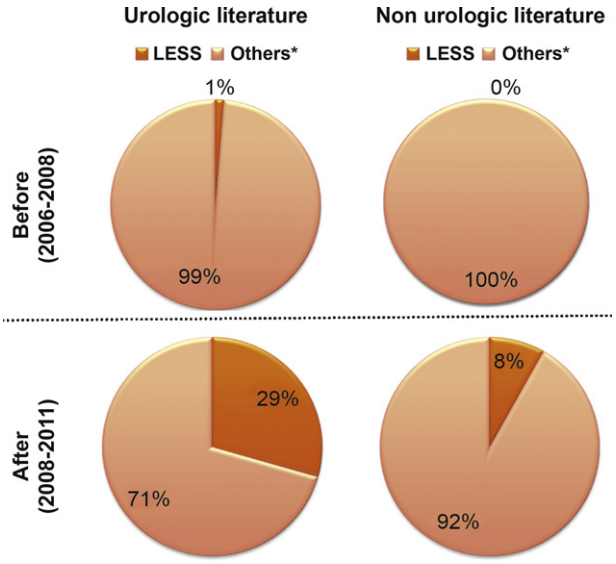

Fig. 2 – Performance of the term LESS as compared with others when querying urologic and nonurologic literature by using PubMed search engine.
LESS = laparoendoscopic single-site surgery; SPA = single-port access; SILS = single-incision laparoscopic surgery; OPUS = one-port umbilical surgery; SPL = single-port laparoscopy; ENOTES = embryonic natural orifice transluminal endoscopic surgery; UNOTES = umbilical natural orifice transluminal endoscopic surgery; STLS = single-trocar laparoscopic surgery.
***Others: SPA, SILS, OPUS, SPL, ENOTES, UNOTES, and STLS.**

endoscopic surgery), and STLS (single-trocar laparoscopic surgery). Information was recorded according to the number of citations and to the number of citations specific to the urologic and nonurologic literature. Citations not related to the field were likewise noted and recorded.

Our analysis yielded several interesting findings. First, the term LESS has been adopted with fervor since its endorsement in 2008. However, the acronyms SPA, SILS, SPL, and STLS continue to be used as commonly as LESS (Fig. 1). One can speculate that the persistent use of these latter terms is driven by the preferred access technique and operating platform used by the surgeon/author. The acronyms SPA, SPL, and STLS imply not only the surgical approach but also the use of a readily available, purpose-built single-port platform. This certainly appears to be the case with the term SILS, which has been trademarked by a company as the name of its commercially available multichannel port. This trend toward dual labeling (both technique and device) may linger, given an apparent preference among surgeons to use these multichannel ports [1,14–16].

Second, the term LESS has been adopted with more consistency within urology when compared with other surgical fields, namely gynecology and general surgery (Fig. 2). Although this is not surprising, given that a group of urologists coined the term LESS, it is nevertheless disappointing, since the term was endorsed via a multispecialty consensus statement [12,13]. It remains to be determined how to increase the impact of a urology-originated term within the surgical community as a whole.

Finally, our exercise confirmed that the term LESS offers the highest specificity and power among comparable acronyms. In other words, when using terms other than LESS, >10% of the citations retrieved are completely unrelated to the subject (Fig. 3).

Based on our findings, we strongly recommend the continued use of the term LESS. We believe the application of such appropriate terminology imbues transparency and empowers the quality of our evidence. In an effort to facilitate ongoing interdisciplinary communication and continued maturation of the scarless surgical field, we urge our colleagues from other surgical disciplines to likewise endorse the term LESS.

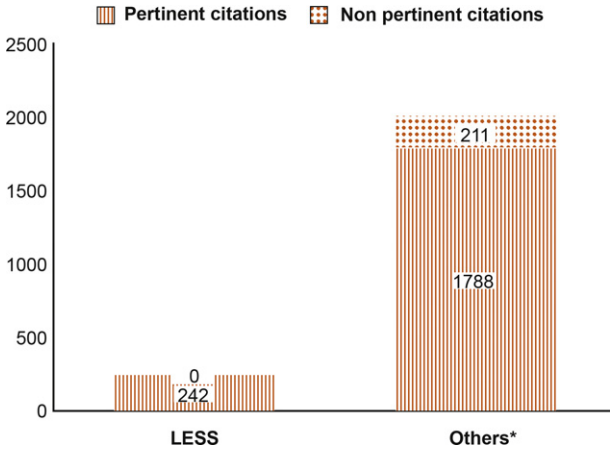

Fig. 3 – Number of citations related or not related to the subject by using different keywords for PubMed query (November 2008–July 2011).
LESS = laparoendoscopic single-site surgery; SPA = single-port access; SILS = single-incision laparoscopic surgery; OPUS = one-port umbilical surgery; SPL = single-port laparoscopy; ENOTES = embryonic natural orifice transluminal endoscopic surgery; UNOTES = umbilical natural orifice transluminal endoscopic surgery; STLS = single-trocar laparoscopic surgery.
***Others: SPA, SILS, OPUS, SPL, ENOTES, UNOTES, and STLS.**

Conflicts of interest: The authors have nothing to disclose.

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