



# Current status of local anesthesia for inguinal hernia repair in developing countries and in the United States

M. Argo<sup>1</sup> · C. Timmerman<sup>1</sup> · A. Ochoa-Hernandez<sup>2</sup> · C. Ortiz<sup>2</sup> · V. Lopez-Huertas<sup>2</sup> · S. Huerta<sup>1,2,3</sup>

Received: 17 January 2019 / Accepted: 23 January 2019 / Published online: 2 February 2019  
© Springer-Verlag France SAS, part of Springer Nature 2019

**Keywords** McVay repair · Bassini · Inguinal hernia outcomes · Lichtenstein

Letter to the Editor,

We write in response to a recent article published by Tabiri et al. [1]. Tabiri and colleagues [1] report that only 37% of the 8080 hernia repairs performed in 41 hospitals across northern Ghana utilized LA, with the remaining majority (60%) performed under regional anesthesia (RA). Having referenced the most recent international guidelines that encourage the use of LA, Tabiri et al. argue that its use is indeed underutilized [2]. In attempts to better understand the underutilization of LA in northern Ghana, their study collected survey results from 66 local clinicians. Though the majority of responders reported that LA requires less staff and equipment, is less expensive, and has a shorter recovery, 66% of the clinicians were unfamiliar with the international guidelines [1, 2]. In addition, roughly 65% of clinicians in Ghana reported RA is more convenient for both the surgeon and the anesthesiologist [1].

As one of the most common operations performed worldwide, all aspects related to outcomes and cost should be constantly scrutinized for inguinal hernia repairs (IHR). The impetus for writing this report emerged from observations that LA is not underutilized only in Ghana, but in other developing countries as well. For instance, we conducted a retrospective review of inguinal hernias performed at the Hospital Nacional de San Benito in el Peten, Guatemala [3]. We found that 97.6% of the 90 hernias were performed under

RA. No LA was utilized by the 8 general surgeons at this hospital over the course of the 2017. Why was the use of LA not attempted in Guatemala and why was it underutilized in Ghana?

At the VA North Texas Health Care System (VANTHCS), LA was not offered until 2015. Observations at our sister institutions: The University of Texas Southwestern, Parkland and Clements University Hospital also reveals the absence of LA for IHR. The increasing age and number of comorbid conditions of our patients dictated a need for implementation of LA. The first year we initiated the use of LA with monitor anesthesia care (MAC). 12% of all inguinal hernias were performed under LA + MAC. In 2018, our analysis showed that 80% of all IHR were under LA + MAC at the VANTHCS. However, this practice has not been adopted at our sister institutions. Empirical evidence in hospitals around the United States suggests similar findings.

In our experience, the lack of MAC has prevented surgeons from taking advantage of LA in Guatemala, but RA is extremely popular, easy and inexpensive. GA is clearly more comfortable for the surgeon and the anesthesiologist, but this is at the expense of cost and patient's outcomes. We would like to continue a conversation on the lack of LA + MAC in all programs as this practice is being underutilized and the benefits have been clearly shown by level I evidence.

## Compliance with ethical standards

**Conflict of interest** The authors listed above declare they have no conflicts of interests.

**Ethical approval** IRB was obtained from the University of Texas Southwestern Medical Center for the retrospective review at HNSB. A letter of approval from the chief of staff and the chief of general surgery at HNSB were obtained as well.

✉ S. Huerta  
Sergio.Huerta2@va.gov

<sup>1</sup> University of Texas Southwestern Medical Center, Dallas, TX, USA

<sup>2</sup> Hospital Nacional de San Benito, El Peten, Guatemala

<sup>3</sup> VA North Texas Health Care System, 4500 S. Lancaster Road, Dallas, TX 75216, USA

**Human and animal rights** This article does not contain any studies with human or animal participants performed by any of the authors.

**Informed consent** For this Letter To The Editor, which included a review of the current available literature, formal consent is not required.

## References

1. Tabiri S, Russell KW, Gyamfi FE et al (2018) Local anesthesia underutilized for inguinal hernia repair in northern Ghana. *PLoS One* 13:e0206465
2. HerniaSurge G (2018) International guidelines for groin hernia management. *Hernia* 22:1–165
3. Imran JB, Ochoa-Hernandez A, Herrejon J et al (2017) Surgical approach to gallbladder disease in rural Guatemala. *J Surg Res* 218:329–333

**Publisher's Note** Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.