Editorial

A Decline at Inpatient Benign Hysterectomy is Perceived in Brazil: What are the Strategies to Improve Surgical Resident Training?

Um declínio na histerectomia benigna de internação é percebido no Brasil: quais são as estratégias para melhorar o treinamento de residentes cirúrgicos?

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Hysterectomy is one the most performed gynecological surgeries worldwide.[1] A point to be considered for this procedure is the growth of minimally invasive techniques, such as laparoscopy, robotics and vaginal approach for hysterectomy, which have decreased the cost of this procedure.[2] These points have caused a decrease of almost 40% in the number of inpatient hysterectomies in the US.[1] On the other hand, there are several non-surgical options to avoid operating patients with a benign gynecological disease, and they are rising everywhere.[3]

In Brazil, few studies have been addressing this point. Accessible data about any surgery is made available by the Brazilian Unified Public Health System (SUS, in the Portuguese acronym) and registered on the database of the Computer Science Department of the SUS (DATASUS, in the Portuguese acronym). We have analyzed the number of admissions for hysterectomies between 2008 and 2017 in the 5 regions of Brazil: a total of 1,004,668 hysterectomies were performed in the period, and the Northeastern Region presented the highest rates (n = 394,047/39.22%) compared to the Southeastern (n = 326,233), Southern (n = 133,383), Midwestern (n = 77,751) and Northern (n = 74,254) regions.

We observed a decreasing trend in hysterectomies within this period (a 16% reduction), with the Southeastern Region presenting the highest trend for decline (►**Fig. 1**). This trend is already seen in the United States, with a 40% reduction in the number of inpatient procedures,[1] as well as in Australia (5% reduction),[4] Taiwan[5] (19.5% reduction), Italy,[6] Ireland[7] (27% reduction), and Austria.[8] The Southeastern and Southern regions of Brazil present the higher socioeconomic indexes when compared to the Northeastern and Northern regions, and there is a possibility, yet unproven, that there is a higher use of the levonorgestrel-releasing intrauterine system (LNG-IUS) in these more affluent regions, which may influence the decline rate in the Southeastern Region.

Unfortunately, DATASUS records do not allow us to know the medical reasons for performing hysterectomy. Uterine fibroids are one of the main causes worldwide,[9] and are probably also prevalent in Brazil. Heavy menstrual bleeding (HMB) is another important cause; in Spain, the use of the LNG-IUS for HMB reduced the number of women scheduled for hysterectomy,[10] and the system became a non-surgical viable alternative. A Brazilian Southeastern prospective study with two cohorts of women (LNG-IUS and hysterectomy) with HMB[11] showed an 83.1% bleeding control in the LNG-IUS group, and 86.8% of continuation rate with this device.[11] Moreover, another study with patients from the SUS showed that the use of LNG-IUS resulted in lower direct and indirect costs when compared to thermic endometrial ablation and hysterectomy for HMB;[12] thus, the cost-effectiveness of the LNG-IUS and its insertion in an outpatient setting reinforce its role for women with HMB.

In Brazil, DATASUS results show that less than 1% of laparoscopic hysterectomies during this period, a rate that is probably higher, because laparoscopic and robotic devices are more present in private hospitals and concentrated in the Southeast. Thus, we do not have the true answer, and this can cause us to underestimate the data. Interestingly, Cohen et al[13] analyzed in the US all outpatient hysterectomies, and they have concluded that there are approximately 100-200,000 hysterectomies performed in outpatient settings,

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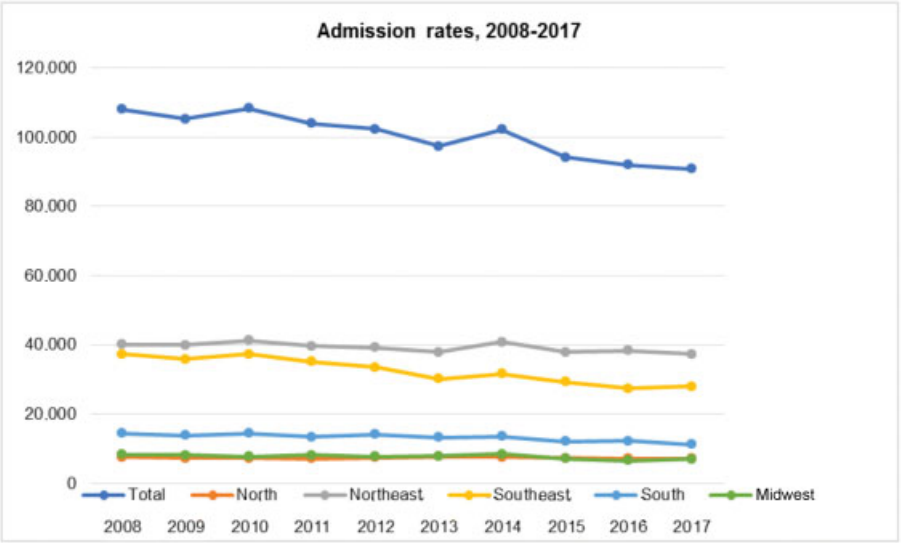

Fig. 1 Admission rates from public hospitals for inpatient hysterectomies due to benign diseases.

mostly by laparoscopy, which could not represent an absolute reduction in the number of hysterectomies in the US.

If we consider that we do not have a large volume of outpatient hysterectomies in Brazil, and that these rates are really declining, this may represent a positive aspect (the reduction of surgeries with the clinical control of gynecological symptoms). On the other hand, one of the negative aspects is the possible reduction in the surgical training of residents. There is a milestone development project created by the Accreditation Council for Graduate Medical Education (ACGME) and the American Board of Obstetrics and Gynecology (ABOG) to identify the residents that progress throughout their training and to facilitate the early identification and remediation when they fail to progress.[14] In the US, only 1/3 of the residents have reported that they feel "completely prepared" to perform a vaginal hysterectomy, compared with 58.3% that reported the same for abdominal hysterectomy[15] A retrospective analysis (from 2002 to 2012) of the US national case log reports for obstetrics and gynecology from 11,508 residents showed that the overall number of hysterectomies has remained stable, but the methods that were predominant during the past decade have changed substantially with the increase of the laparoscopic approach.[16] Nevertheless, residency programs should contain a simulation training program for residents to improve their abilities; this is a reality in Canada, where laparoscopic box trainers are present in all accredited residency programs, and at least fifteen gynecological skills are taught through the use of simulators.[17]

In Brazil, there is no teaching model for laparoscopic skills, or validated tools for its evaluation. As a result, skill and expertise may vary among residents, depending on the type and number of cases they have assisted. A Brazilian study used a prospective questionnaire analyzing skill, competences and training in a box trainer and in pigs. After the training, there was a significative improvement in the feeling of competence in laparoscopic surgeries with level 1 and 2 of difficulty.[18]

Vaginal hysterectomy is another minimally invasive approach, with validated low-cost task trainers as a teaching tool, and it should be taught in scenarios where the lack of endoscopic devices is a reality.[19]

The crucial question is: "What makes a surgeon competent?" Surgical competence is the product of many factors, including not only technical knowledge, but medical knowledge, good decision-making; professionalism, and interpersonal and communication skills. Teaching skills in surgical technique is, therefore, one of the most important responsibilities in a medical school. It is important that, as surgeons and proctors, we observe our residents in the daily practice and help them identify their own weaknesses and strengths, so they can improve their own learning curves and finish their training with more confidence. Hysterectomies, to this point, will not end; patient satisfaction should be our first goal, and avoiding unnecessary surgical procedures is always the first choice.

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