Standardization of Laparoscopic Operative Reporting: Improving Gynaecological Surgeon Communication

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Abstract

Objective: No standardization of quality of operative reporting currently exists, and this represents a missed opportunity for communication among health care providers. This study proposed a method to improve operative notes by structuring the findings by six anatomical zones of the pelvis. Objective I was to validate the method of documenting six zones of the pelvis by using intraoperative photography. Objective II was to compare this method with dictations from operative reports created before introducing this method.

Methods: This retrospective cohort study evaluated pre- and post-intervention results of using six zones to guide operative reporting. Reports were collected from participating surgeons and were scored using a validated scoring tool. Each participant was taught to photograph six zones and use the zones in the operative report. Pre- and post-intervention cases were compared using generalized linear mixed models.

Results: Scores of study participants using the zones were significantly higher than those without ($P < 0.0001$). Surgeons showed an ability to improve their reporting. The detail illustrated in the cases was qualitatively richer, and the anatomy within the six zones was referenced more frequently.

Conclusion: Compared with reports without the technique, incorporating the six zones greatly enhances operative reporting and likely would improve communication among care providers. More reliable communication of intraoperative findings has the potential to enhance the value of laparoscopy greatly as a diagnostic tool across gynaecological subspecialties.

Key Words: Operative reporting, dictations, gynaecological surgery, laparoscopy, surgeon communication

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Résumé

Objectif : À l'heure actuelle, il n'existe aucune norme de qualité pour la production de rapports opératoires; pour les fournisseurs de soins de santé, cela constitue une occasion manquée de communiquer efficacement. La présente étude suggère une façon d'améliorer les notes opératoires en organisant les données selon six zones anatomiques prédéterminées dans le pelvis. Le premier objectif était de valider la consignation des données des six zones du pelvis à l'aide de photographies prises durant l'intervention. Le deuxième objectif était de comparer les rapports ainsi produits à des rapports dictés avant la détermination des six zones.

Méthodologie : Cette étude de cohorte rétrospective a évalué les rapports produits avant et après la mise en place de la méthode des six zones. Les rapports ont été recueillis auprès de chirurgiens participants, et ont été notés au moyen d'un outil de notation validé. Les participants ont appris à photographier les six zones et à se servir de celles-ci pour produire leurs rapports opératoires. La comparaison des résultats obtenus avant et après la mise en place de la méthode des six zones a été faite au moyen de modèles linéaires mixtes généralisés.

Résultats : Les notes obtenues par les participants s'étant servis des six zones étaient significativement plus élevées que celles des autres participants ($P < 0,0001$). Les chirurgiens ont réussi à améliorer la qualité de leurs rapports : les renseignements qu'ils contenaient étaient qualitativement plus riches, et les structures anatomiques à l'intérieur des six zones y étaient plus souvent mentionnées.

Conclusion : Le recours aux six zones améliore grandement les rapports opératoires et améliorerait fort probablement l'efficacité des communications entre les fournisseurs de soins. Une meilleure communication des données peropératoires a le potentiel d'améliorer considérablement la valeur de la laparoscopie comme outil diagnostic dans les sous-spécialités de la gynécologie.

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INTRODUCTION

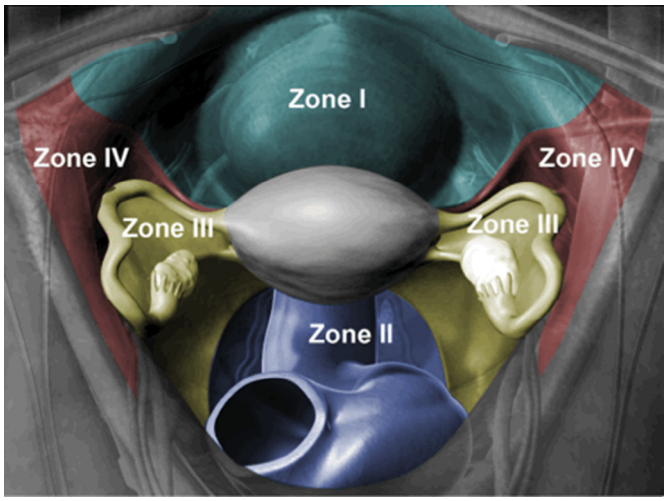
Laparoscopic pelvic anatomical assessment and reporting of intraoperative findings are often performed in a non-standardized fashion and at the surgeon's discretion. Although some surgeons are attentive to detail and make every effort to communicate their findings, omissions of surgical results represent critical missed opportunities to communicate important diagnostic information that could improve patient care, assist with medical-legal discrepancies, and aid in medical billing. In general surgery, deficiency in operative reporting has been identified as a weakness, especially in training post-graduates.[1–3] In a review of operative reports in the surgical literature, only 46% of information considered important was included, and superfluous information was identified 97% of the time.[4] For many in both the surgical and gynaecological fields, when reviewing patient records, this issue is a daily frustration.

Our group proposed a novel method for systematic pelvic assessment on the basis of six anatomical landmark zones that has the potential to enhance intraoperative diagnostic accuracy and provide better communication of operative findings among care providers.[5] The pelvis is divided into two midline zones (zone I and II) and four lateral zones (right and left zones III and IV). More reliable communication of intraoperative findings has the potential to enhance the value of laparoscopy greatly as a diagnostic tool across gynaecological subspecialties. The six zones would serve as a guide for reporting operative findings. To determine the potential usefulness of this technique, we sought to validate these findings in an academic gynaecological practice. We hypothesized that operative reports using the six zones would result in more comprehensive communication of relevant anatomical findings identified at surgery, defined as higher scores on the Structure Assessment Format for Evaluating Operative Reports (SAFE-OR), a validated surgical report scoring tool.[1] The SAFE-OR includes two major components: the structured assessment and the global score. The structured assessment includes descriptions of the actual operative findings. We expanded this to include the six zones specifically used in our study. The global score is a subjective evaluation of the coherence, reproducibility, and overall quality of the dictated operative report. Scores are determined on the basis of a percentage of what was dictated compared would what a thorough report should dictate. Therefore, a score of 100% in both the structured and global sections would mean that not only are all of the objective descriptions fulfilled, but also the report subjectively reads well and makes sense to the reader.

METHODS

Gynaecological surgeons at University Hospitals Case Medical Center in Cleveland, OH were invited to participate on the basis of the following inclusion criteria: (1) the surgeon must be a fellow or attending surgeon; (2) the surgeon must regularly perform laparoscopic surgical procedures; and (3) the surgeon would be willing to dictate the cases himself or herself. Exclusion criteria were as follows: any non–attending-level surgeon and any individual already familiar with SAFE-OR. Participants were instructed on dictation using the six zones and were asked to incorporate their surgical findings in a structured manner according to the six anatomical landmark zones of the pelvis, described by Bedaiwy et al.[5] and illustrated in the Figure. The zones include (1) the anterior uterus and bladder, (2) the posterior uterus and cul-de-sac, (3) the left adnexa, (4) the right adnexa, (5) the left pelvic sidewall and (6) the right pelvic sidewall (see Figure). Participants were also asked to obtain six photographs at the beginning of each laparoscopic or robotic procedure corresponding to the six anatomical landmark zones of the pelvis. Cases were collected from the participating surgeons, de-identified, and independently scored by three judges, who also were all gynaecological surgeons, using the SAFE-OR.[1] The photographs were printed and submitted to the study coordinator by depositing them into a locked box kept in each operating room. The photographs were then de-identified, given a study number, and used by the judges to verify the anatomy witnessed during the case. Therefore, if the posterior cul-de-sac truly showed no pathological features, for example, a normal-appearing sigmoid colon and no free fluid according to the operative report, the photograph of zone II would validate that. Surgeon participants were naïve to the SAFE-OR as a measuring tool.

Figure. Six zones of the pelvis.



A priori, the investigators defined a high-quality operative report as scoring ≥80% on the SAFE-OR. We hypothesized that at least 60% of the dictated cases using the six zones technique would have this level of detail. Post hoc