Endoscopic surgery has been considered as one of the major advances in the field of surgery, further with its safe and systematic introduction in the pediatric and even the neonatal age group. This advancement has brought with it a major transformation in the use of digital and robotic technology in surgical practice with better outcomes in many areas when compared to open procedures. Besides the digital and robotic applications, endoscopic surgical procedures utilize multiple devices that are employed in the presence of gas insufflation dynamics that require essential and appropriate documentation of surgical procedures. The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) that caused coronavirus disease 2019 (COVID-19) had put every aspect of endoscopic surgery under scrutiny and set the precedence for accurate documentation of procedures.

The appropriateness of documentation starts with the commencement of the procedure and the positioning of the patient. Changes in position of the patient instigated during an ongoing procedure also need to be documented as insufflation pressures affect the organ perfusion dynamics. Insufflation pressures and flow rates and possible adjustments that are sometimes necessary during the procedure should be recorded, along with the total volume of insufflation gas used. Port site leaks that are frequently responsible for flow rate adjustments are best managed by rectifying the cause, however, often during critical stages of the procedures are managed by increased flow rates so as to minimize disruption and rearrangement of the entire set-up. The use of humidified gas as well as filters, if used, should be included with the insufflation parameters. Documentation should also include the scope size and the angle of view.

The technique of primary port and work port placement are important. Whereas, the primary port placement may vary between open placement and closed approaches, work ports present with an array of varying sleeve configurations and are coupled with trocars that may be sharp or blunt tipped. Fixation of primary port is not often documented unless a balloon port has been used. In neonatal surgery, securing of the ports is a major issue and it is important to record the technique of fixation. Similar to the entry of ports, removal of ports and the closure of port sites should be mentioned. Herniation complication through port sites, the occurrence of which has been observed even with the use of 3 mm ports, depends on the technique of port site closure. This information will be important if there is an increase in incidence that may be necessitate an audit or service evaluation.

Electrosurgical devices using manual setting modes require recording of their settings. Setting records are not required when automated devices are used. However, with monopolar and bipolar devices, it must be mandatory to note the original setting as well as the altered settings if changes are made during the procedure. Malfunction in electrical devices and if replacements were made during the procedure need to be mentioned. Injuries due to malfunctioning electrical devices may often not be evident during the time of surgery, but may appear in the early post-operative period. Suction and irrigation if performed should record the amount of fluid utilized and the temperatures of the irrigation fluid if applicable.

Highlighting some of the above basics that should be part of surgical documentation, it is important to bear in mind that the population worldwide is still being affected by COVID-19, and it is imperative to maintain precise records. Besides COVID-19, another aspect that demands detailed and accurate surgical records are neonatal endoscopic procedures, where the complete extent of metabolic changes during surgery are still uninvestigated. Furthermore, endoscopic surgery in preterm infants is now popular for numerous index cases, with these patients presenting equal challenges for the surgical teams, anesthetists and intensive care teams in managing patients with immature organ systems that have undergone a dynamic surgery. The incisions may be small but endoscopic surgery is a major procedure from
the surgical as well as hemodynamic point of view in pre-term neonates. Detailed and accurate documentation in pre-term infants is an area of paramount importance to further understand the intraoperative and postoperative response in individuals with isolated surgical conditions as well as in associated comorbidities.

Amulya K. Saxena
Editor-in-Chief