Operating time

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- A Prospective Observational Study Comparing Retrorectus and Anterectus Mesh Placement in Incisional Hernia Repair
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Operating time, also known as surgical or procedure time, refers to the duration it takes for a surgical procedure to be completed from the beginning of the incision to the closure of the surgical site. It is a critical parameter in surgical planning, resource allocation, and patient care management.

For the operating room management, the basis is the surgical suite, and evaluation can be divided into the duration of anesthesia, operation time, operating room time, and operating room preparation time. Anesthesia duration is divided into four moments: anesthetic induction, maintenance, awakening, and recovery. The operative time consists of dieresis, hemostasis, exeresis, and suture. Operating room time includes patient stay, from arrival to exit. Operating room preparation time (turnover) is the time between one patient leaving and another entering, including cleaning and replacing the necessary material. The lengthiest stage during a procedure is anesthesia.

Several factors can influence operating time:

Complexity of the Procedure: More complex surgeries generally take longer to complete. Procedures with intricate steps, multiple stages, or involving various anatomical structures tend to have longer operating times.

Surgeon Experience and Skill Level: Surgeon expertise and experience can impact operating time. Proficient surgeons may complete procedures more efficiently, leading to shorter operating times.

Patient Factors: Patient-specific factors, such as the patient's overall health, age, and comorbidities, can influence the ease and speed of the surgical procedure. Patients with multiple health issues may require more time for careful handling and monitoring.

Type of Anesthesia: The choice of anesthesia (local, regional, or general anesthesia) can affect operating time. General anesthesia may be associated with a longer recovery period, influencing the overall duration of the surgical procedure.

Technology and Equipment: The availability and use of advanced surgical technologies and equipment can impact operating time. Minimally invasive techniques or robotic-assisted procedures may reduce operating time compared to traditional open surgeries.

Team Efficiency: The coordination and efficiency of the surgical team, including nurses, anesthesiologists, and surgical assistants, play a crucial role. A well-coordinated team can contribute to smoother workflow and potentially shorter operating times.

Preoperative Planning: Adequate preoperative planning, including detailed knowledge of the patient's anatomy, potential challenges, and contingency plans, can streamline the surgical process and contribute to efficient operating times.

Emergent vs. Elective Procedures: Emergency or urgent surgeries may have shorter preparation times but can still vary based on the complexity of the case. Elective procedures allow for more thorough planning, potentially reducing the risk of complications and improving efficiency.

Intraoperative Complications: Unexpected intraoperative complications, such as bleeding or unexpected anatomical variations, can prolong operating time. Surgeons must address these challenges to ensure patient safety.

Postoperative Care Considerations: The postoperative care plan, including monitoring and recovery, can influence the overall time spent in the operating room.

Efforts to optimize operating time involve a combination of careful preoperative planning, efficient teamwork, the use of advanced technologies, and continuous quality improvement initiatives. Balancing the need for thorough and safe surgical procedures with minimizing operating time is a key consideration for healthcare providers.

Delays in beginning operations in the morning lead to a loss of valuable operating time and can cause frustration among the medical personnel involved.

Objective: So far there are no prospective, multicentric investigations of the incidence and reasons for delayed first incision times in the morning. The effect of planning list instability of first cases on late operating room starts has not yet been evaluated.

Material and methods: In this multicenter prospective study delays in surgical incision time in all first cases of the day were investigated in 36 German and Swiss hospitals (14 surgical specialties) over a period of 2 weeks.

Results: A total of 3628 first of the day cases were included in the study. Looking at all subspecialties combined 50.8% of the first cases of the day were delayed by more than 5 min and in 30.2% of cases longer than 15 min. Incidences of delayed surgical incision time >5 min ranged from 40.0% (gynecology) to 66.8% (neurosurgery). The main reasons for delays in ascending order were prolonged induction of anesthesia compared to the planned time, the delayed appearance of the surgeon and prolonged preparation for surgery. The incidence of delays in incision times for planning list instability was increased by 10% and the average delay increased by 7 min.

Conclusion: Delays in surgical incision times of the first operation of the day have a high incidence in most surgical specialties; however, the reasons for delays are manifold. Plan instability of operating room lists with respect to the first cases has a negative effect on the punctuality of the incision time and should therefore be avoided [1)].

1)

Joos C, Bertheau S, Hauptvogel T, Auhuber T, Diemer M, Bauer M, Schuster M. Verzögerungen der Schnittzeit des ersten Falles : Analyse von Inzidenzen und Ursachen sowie des Effektes von Planinstabilität [Delayed incision time of the first case : Analysis of incidences and causes and the effect of list planning instability]. Chirurg. 2021 Feb;92(2):137-147. German. doi: 10.1007/s00104-020-01207-6. PMID: 32572499.

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