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Surgical Effectiveness of Prevention of Postoperative Purulent Complications in Children

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Abstract

Postoperative purulent complications (PGO) are one of the leading causes of worsening outcomes of surgical treatment in children. These complications can significantly slow down the recovery process, increase the length of hospital stay and require additional surgical intervention, which, in turn, increases the burden on the medical system and financial resources of healthcare. The problem of prevention of acute respiratory viral infections in children is especially relevant in the context of the high sensitivity of the child's body to infectious agents and the characteristics of their immune response. Effective prevention of complications requires an integrated approach that includes both infection prevention mechanisms and optimization of postoperative management of children. [1, 3, 5, 7].

Keywords:

Introduction

The relevance of the problem. The frequency of postoperative purulent complications in children varies significantly depending on the type of surgery, the state of the patient's immune system, and a number of other factors. According to various studies, FGOS can occur in 5-15% of children after surgical interventions, which is due to both the characteristics of the child's body and the lack of timely diagnosis and prevention of infection. The development of purulent complications such as phlegmon, abscesses, peritonitis or sepsis requires careful and multi-level prevention aimed at minimizing the risk of infection and increasing the body's resistance to infectious agents. [2, 4, 6, 8].

Risk factors and mechanisms of development:

Regardless of the type of intervention, several key factors influence the development of purulent complications in the postoperative period. Among them, it is necessary to highlight:

 Technical aspects of surgical intervention: Violation of the principles of asepsis and antisepsis, inadequate drainage of cavities, the use of non-sterile instruments or poor-quality treatment of the surgical field significantly increase the risk of infection.

The state of the child's immune system: In children with impaired immune status, as a result of hereditary diseases, chronic infections or treatment with immunosuppressants, the susceptibility to infections increases significantly.

The presence of concomitant diseases: Chronic diseases such as diabetes, heart defects, metabolic disorders or diseases of the gastrointestinal tract can complicate the postoperative course and increase the likelihood of purulent complications.

Type of surgery: Operations on the intestines, respiratory organs, urogenital tract, and skin are the most vulnerable to infection, as they are directly related to the microbiota of these organs.

Inadequate postoperative care: Non-compliance with the standards of dressings, lack of monitoring of the wound condition and weakening of control over the child's condition in the postoperative period can lead to late detection of complications.

The main methods of prevention of POGO

Effective prevention of postoperative purulent complications in children is based on an integrated approach that includes a number of fundamental stages, starting with patient preparation and ending with the recovery period [9, 11, 13].

Preventive use of antibiotics: The administration of antibiotics in the postoperative period in order to prevent purulent complications is a standard practice. The choice of an antibiotic should take into account the possible pathogens, their antibiotic resistance and the patient's condition. Broad-spectrum antibiotics, such as cephalosporins or carbapenems, are often used in prophylactic doses within 24-48 hours after surgery. In cases with a high risk of infection (for example, during operations on the intestines or organs of the urinary system), the preventive use of antibiotics may last longer.

Asepsis and antisepsis: Adherence to strict principles of asepsis and antisepsis at all stages of surgery is critical to prevent wound infection. This includes the sterility of instruments, proper treatment of the surgical field, as well as compliance with protocols for the sterilization of tissues and materials.

Optimization of postoperative care and supervision: One of the most important aspects is the organization of postoperative monitoring. Regular surgical examinations, monitoring of the wound condition, the use of sterile dressings and timely replacement of drainage systems minimize the risk of infection. An important step is to carry out an early diagnosis of signs of infection, which allows you to start treatment immediately.

 Application of drainage systems: In some cases, during operations with a high risk of abscess formation or peritonitis, the installation of drainage is mandatory. This helps to drain excess fluid and prevents stagnation of infectious exudate in the tissues.

Correction of immune status: In children with weakened immune systems, preliminary preparation is necessary, including the introduction of immunomodulators or correction of vitamin deficiency, as well as the use of drugs to normalize the microbiota.

Multidisciplinary approach: The effectiveness of the prevention of purulent complications is significantly enhanced by the interaction of various specialists, including surgeons, anesthesiologists, infectious diseases specialists and nurses. Only the comprehensive and well-coordinated interaction of all members of the medical team makes it possible to ensure an appropriate level of care and reduce the risk of complications.

Forecast and results. If all the above measures are followed, the prevention of postoperative purulent complications in children is highly effective. With early intervention and competent therapy, the likelihood of serious complications is significantly reduced. The key factor is the ability to promptly diagnose and control the development of infection in the early stages.

In general, comprehensive prevention of acute respiratory viral infections allows not only to reduce the frequency of infection, but also to improve the quality of life of a child in the postoperative period, speeding up recovery and reducing the length of hospital stay. It is important to note that preventive measures should be flexible and adapted to the individual characteristics of each patient [10, 12].

Conclusion

The surgical effectiveness of the prevention of postoperative purulent complications in children largely depends on the application of a multi-level approach, including strict standards of asepsis, early administration of antibiotics, monitoring of the patient's condition and optimization of immune status. The integration of these methods into clinical practice helps to reduce the frequency of postoperative infections and improve surgical treatment outcomes, which ultimately has a positive impact on the patient's quality of life and the effectiveness of treatment in general.

References

1. Abdulazizova S. and others . The influence of physical factors on the morphofunctional features of the thymus gland (literature review) //Central Asian Journal of Education and Innovation. – 2023. – Vol. 2. – No. 10. – pp. 5-9.
2. Beinarovich K. V. Nitric oxide and ozone in the prevention and treatment of purulent-inflammatory complications of postoperative wounds //Smolensk medical Almanac. – 2015. – No. 1. – pp. 6-8.
3. Inakov I. T. et al. Therapeutic analgesia and prevention of complications after lung surgery in children //Economics and society. – 2022. – №. 5-1 (96). – Pp. 450-455.
4. Mamasaidov Zh. T., Abdulkhakimov A. R. Application of metric parameters of the auricle in determining the somatic sex of a person //Journal of clinical and preventive medicine.-2023. - 2023. – Vol. 1. – pp. 160-162.
5. Morozov A.M. et al. Assessment of economic losses due to the development of infection in the surgical area //The health care manager. – 2022. – No. 1. – pp. 54-60.
6. Musaev A. I., Kasenov A. S. Integration of methods of prevention of postoperative purulent complications in abdominal surgery //Annals of surgery. – 2018. – Vol. 23. – No. 4. – pp. 227-232.
7. Oliynik A. P., Pereyaslov A. A. Antibacterial therapy in the prevention of postoperative purulent-septic complications in pediatric surgery //Pediatric surgery. – 2015. – Vol. 19. – No. 1. – pp. 31-35.
8. Parshikov V. V. et al. A half-century path of development of prevention of infectious complications in postoperative wounds //Medical Bulletin of Bashkortostan. – 2017. – T. 12. – №. 1 (67). – Pp. 82-93.
9. Styazhkina S. N. et al. Therapeutic and preventive measures for purulent infection and sepsis in a surgical clinic //StudNet. – 2022. – Vol. 5. – No. 5. – pp. 4018-4025.

10. Sytkov V. V., Poddubny I. V., Kozlov M. Yu. Optimization of perioperative antibacterial therapy in reconstructive operations for colon agangliosis in children //Issues of modern pediatrics. – 2016. – Vol. 15. – No. 4. – pp. 352-357.
11. Fattakhov N. Kh., Abdulkhakimov A. R. Unique features of the auricle structure //Re-health journal. – 2022. – №. 4 (16). – Pp. 17-19.
12. Shamsiev A.M., Yusupov Sh. A., Shakhriev A. K. Causes of postoperative intra-abdominal abscesses in children and ways of their prevention //Academy. – 2020. – №. 6 (57). – Pp. 95-98.
13. Yusupov S. A. and others. Prediction and prevention of postoperative intra-abdominal adhesions in children //Experimental and clinical gastroenterology. – 2021. – №. 1 (185). – Pp. 127-132.