

COMMISSION FORENSIC MEDICAL EVALUATION OF ADVERSE OUTCOMES FOLLOWING CONGENITAL HEART DEFECT SURGERY, LITERATURE REVIEW

Sh.I. Ruziev¹, J.I. Muydinov², S.A. Shakirov²

¹Tashkent Pediatric Medical Institute

²Fergana Medical Institute of Public Health

Abstract.

Surgical interventions for congenital heart defects (CHDs) represent complex and high-stakes procedures in cardiothoracic surgery. Adverse outcomes following such surgeries can have significant clinical and legal ramifications. Commission forensic medical evaluation plays a pivotal role in analyzing and assessing these outcomes, aiding in the determination of causality and the degree of medical personnel responsibility.

Keywords: cardiothoracic surgery, pathomorphological changes, commission, forensic.

TUG'MA YURAK NUQSONLARI BO'YICHA OPERATSIYADAN KEYINGI SALBIY TA'SIRLARNI SUD-TIBBIY BAHOLASH.

Sh.I. Ro'ziyev¹, J.I. Muydinov², S.A. Shakirov²

¹Toshkent pediatriya tibbiyot instituti

²Farg'ona jamoat salomatligi tibbiyot instituti

Annotatsiya.

Tug'ma yurak nuqsonlari (TYuN) uchun jarrohlik aralashuvlar kardiotorasik jarrohlikda yuqori xavfli murakkab protseduralardir. Bunday operatsiyalardan keyingi salbiy natijalar sezilarli klinik va huquqiy oqibatlarga olib kelishi mumkin. Komissiya sud-tibbiy ekspertizasi ushbu topilmalarni tahlil qilish va baholashda muhim rol o'ynaydi, tibbiy xodimlarning sabab-oqibat munosabatlari va javobgarlik darajasini aniqlashga yordam beradi.

Kalit so'zlar: kardiotorasik jarrohlik, patomorfologik o'zgarishlar, sud-tibbiy ekspertiza.

КОМИССИОННАЯ СУДЕБНО-МЕДИЦИНСКАЯ ОЦЕНКА НЕБЛАГОПРИЯТНЫХ ПОСЛЕДСТВИЙ ПОСЛЕ ОПЕРАЦИИ ПО ПОВОДУ ВРОЖДЕННЫХ ПОРОКОВ СЕРДЦА.

Ш.И. Рузиев¹, Ж.И. Муйдинов², С.А. Шакиров²

¹Ташкентский педиатрический медицинский институт

²Ферганский медицинский институт общественного здравоохранения

Аннотация.

Хирургические вмешательства по поводу врожденных пороков сердца (ВПС) представляют собой сложные процедуры с высокой степенью риска в кардиоторакальной хирургии. Неблагоприятные исходы после таких операций могут иметь значительные клинические и юридические последствия. Комиссионная судебно-медицинская экспертиза играет ключевую роль в анализе и оценке этих результатов, помогая установить причинно-следственную связь и степень ответственности медицинского персонала.

Ключевые слова: кардиоторакальная хирургия, патоморфологические изменения, комиссионная судебно-медицинская экспертиза.

Congenital Heart Defects: Description and Characteristics

CHDs are structural anomalies of the heart present from birth. They range from relatively simple defects like atrial septal defects to complex anomalies such as Tetralogy of Fallot or transposition of the great vessels. Treating CHDs often necessitates surgical intervention, which in itself carries a high risk of complications [1].

Adverse Outcomes After Heart Surgery

Types of Complications:

- Operative Complications: Cardiac tissue injury, bleeding, arrhythmias.
- Postoperative Complications: Infections, thromboses, re-bleeding, heart failure.
- Long-term Consequences: Recurrence of defects, need for re-operations, chronic heart failure [2].

Causes of Adverse Outcomes:

- Technical Errors: Improper execution of surgical techniques, errors in suturing or anastomosis.
- Diagnostic Errors: Underestimation of defect severity or comorbidities, errors in preoperative planning.
- Organizational Errors: Inadequate preparation of the surgical team, lapses in postoperative care provision.

Criteria for Evaluating Adverse Outcomes

Standards of Medical Care

- Adherence to Clinical Protocols and Recommendations: Assessing the alignment of the performed surgery and subsequent care with established standards and protocols.
- Utilization of Modern Technologies and Methods: Analyzing the use of diagnostic and therapeutic methods in terms of their relevance and effectiveness [3].

Qualification and Experience of Medical Personnel

- Education and Certification: Verifying the required education, certifications, and licenses of medical staff.
- Professional Training and Experience: Evaluating the expertise and experience of the surgical team and other specialists involved in the treatment.

Documentation:

- Medical Records: Reviewing the completeness and accuracy of medical records, operative notes, postoperative observations.
- Documentation of Complications: Ensuring timely and accurate recording of all encountered complications and measures taken to address them.

Causal Relationship Analysis:

- Identification of Errors: Determining the presence and nature of technical, diagnostic, and organizational errors that influenced the surgery's outcome.

- Establishing Links Between Errors and Outcomes: Assessing the impact of identified errors on the occurrence and development of complications.

Methodology for Commission Forensic Medical Evaluations

Composition of the Commission

- Multidisciplinary Team: Including specialists from various disciplines (cardiothoracic surgeons, anesthesiologists, intensivists, pathologists) with experience in CHD treatment.

- Independence and Objectivity: Ensuring the independence of experts and avoiding conflicts of interest [4].

Evaluation Stages:

1. Review of Medical Documentation: Analysis of medical history, operative and anesthesia records, postoperative notes.

2. Interviews with Medical Staff: Gathering information from surgeons, nurses, and other caregivers involved in the patient's treatment.

3. Physical Examination and Autopsy: If necessary, conducting patient examinations or autopsies to identify pathomorphological changes.

4. Comparative Analysis: Comparing findings with established standards and clinical guidelines [5].

Formulation of Conclusions:

- Identification of Defects: Determining the presence and characteristics of medical care defects.

- Severity Assessment of Defects: Classifying defects based on their severity and impact on treatment outcomes.

- Determining Causal Relationships: Formulating conclusions regarding the relationship between medical care defects and adverse outcomes.

Report Preparation:

- Expert Report Composition: Detailing all identified defects, their characteristics, and impacts on treatment outcomes.

- Preparation of Legal Materials: Compiling and presenting reports and expert conclusions in accordance with legal requirements for court proceedings [5].

Conclusion. Commission forensic medical evaluation of adverse outcomes following congenital heart defect surgeries is a complex and multi-stage process that demands deep knowledge and experience in cardiothoracic surgery and forensic medicine. Thorough investigation of all aspects of medical care, assessment of adherence to standards and clinical recommendations, and objective analysis of causal relationships enable the formulation of well-founded and fair conclusions. This rigorous approach contributes to the resolution of legal matters and the enhancement of medical care quality.

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