

Enhancing Care of Children After Cardiac Surgery: A Comprehensive Review

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Abstract: *It is necessary to improve children's care in order to help carers select the most appropriate diagnostic and therapeutic option for the benefit of the child recovering after surgery. For any parent, cardiac surgery is an intimidating event. Treating the youngster as normally as possible is part of aftercare. The ultimate objective is the child's mainstream inclusion. Not every heart that has been repaired is the same; some are weaker than others and may require lifelong monitoring, while others might require more surgery in the future. Heart surgery in children carries a large risk of post-operative morbidity and mortality. Therefore, it is imperative to recognise and measure clinical markers in the early postoperative phase that are predictive of both short- and long-term outcomes. These children's prognosis has been significantly impacted by the way the youngster was managed after surgery. The objective of improving post-operative care for children after cardiac surgery is to establish a framework for the management of paediatric patients undergoing cardiac surgery as well as for anticipating and identifying issues that may emerge.*

Keywords: Children care, Cardiac surgery, after Cardiac Surgery, infection prevention, postoperative infections, pain management

1. Introduction

Twenty-eight percent of congenital birth abnormalities are caused by congenital heart disease (CHD), the most common congenital ailment. A detailed understanding of postoperative cardiac care, including wound care, nutrition, and infection prevention, is necessary to support families in providing the best possible care for their child after discharge. The birth prevalence of congenital heart disease (CHD) is estimated to be 8–12/1000 live births, or 1.35 million babies worldwide. In order to identify issues and oversee their children's care upon hospital discharge, parents need more comprehensive discharge education.

After palliative heart surgery, providing care for children at home can be difficult for carers. Numerous aspects need to be managed, such as the dangers associated with the shunt insertion used in most procedures, the child's undernutrition resulting from insufficient calories consumed, elevated metabolic demands, and diseases related to the gastrointestinal tract, genetics, and other extra-cardiac conditions. The difficulty for carers is to give their patients the best care possible after surgery at home.

Guidelines to Care for Children Following Cardiac Surgery:

Each child's recovery following cardiac surgery is unique, impacted by factors such as age, health status, and the type of operation. Nonetheless, a few fundamental recommendations hold true, such as those for wound care, incision care, fever monitoring, activity limitations, food concerns, rest intervals, and pain management. To speed up the child's recovery and avoid complications, carers need to follow these instructions.

I. Wound Care:

- After heart surgery, proper wound care is essential to prevent infection and promote healing.

- Incisions may have drainage for up to 2 weeks post-surgery.
- Caregivers should avoid soaking the wound, apply new bandages regularly, and monitor for signs of infection.

II. Incision Care:

- Special care is required for incisions during the first 4 weeks post-surgery.
- Incisions should be kept dry and covered with clean clothing.
- Caregivers should avoid scrubbing or picking at scabs to prevent disruption of the healing process.

III. Fever and Child:

- Fever without an apparent cause may indicate infection, necessitating prompt medical attention.
- Different methods of temperature measurement are recommended based on the child's age.
- Specific temperature thresholds indicate when to contact a healthcare provider based on the child's age.

IV. Activity:

- Children need regular physical activity for overall health, but activity should be restricted during the initial recovery period.
- Guidelines for activity restriction vary based on the child's age and surgical procedure.
- Caregivers should protect the chest muscles and bones during activities and avoid lifting heavy objects.

V. Diet/Feeding:

- Proper nutrition is crucial for healing and growth post-surgery.
- Feeding guidelines differ for infants and older children, emphasizing the importance of a balanced diet and adequate calorie intake.

VI. Rest Periods:

- Balancing activity and rest is essential for the child's recovery.
- Caregivers should encourage rest periods and naps to promote healing.

VII. Lifting:

- Proper lifting techniques are crucial to avoid stressing the incision site.
- Infants and small children should be lifted by supporting the neck and shoulders and lifting under the buttocks.

VIII. Management of Pain:

- Pain management should be tailored to the child's needs, with regular administration of painkillers as prescribed.
- Caregivers should not wait for pain to become severe before administering medication.

IX. Medicines:

- Proper administration of prescribed medications is vital for the child's recovery.
- Caregivers should follow dosing instructions, maintain a consistent medication schedule, and avoid mixing medications.

X. Preventing Infection:

- Children are at increased risk of infection post-surgery, necessitating preventive measures such as good hygiene practices and monitoring for signs of infection.

XI. Prevention of Postpericardiotomy Syndrome:

- Caregivers should be vigilant for symptoms of postpericardiotomy syndrome, which can occur after heart surgery.
- Prompt medical attention is necessary if symptoms such as fever, malaise, or chest pain occur.

XII. Follow-Up Care:

- Regular follow-up appointments with healthcare providers are essential for monitoring the child's progress and addressing any concerns.
- Follow-up visits may include wound checks, imaging tests, and consultations with specialists.

2. Conclusion

Optimizing care for children after cardiac surgery is essential for ensuring their long-term health and well-being. Caregivers play a crucial role in implementing guidelines for wound care, activity restriction, pain management, and medication administration. By following these guidelines and attending regular follow-up appointments, caregivers can contribute to positive long-term outcomes for children undergoing cardiac surgery.

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