



## ORIGINAL ARTICLE

### Frequency and Management of Immediate Postoperative Complication in Department of Surgery at Imran Idrees Teaching Hospital, Sialkot

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#### ABSTRACT

**Objectives:** Principal goal of this evaluation was to find the rate and control of immediate postoperative complications within the Department of Surgery at Imran Idrees Teaching Hospital, Sialkot.

**Methodology:** This prospective, analytical and descriptive study was conducted at Imran Idrees Teaching Hospital in Sialkot, Pakistan, examining data from May 1, 2024, to May 20, 2024. The study included all patients who underwent surgical procedures in the Department of Surgery during this period. Postoperative complications were identified, and their frequency was computed and analyzed. The study also reviewed treatment approaches for various complications, identified management techniques, and assessed efforts made to address postoperative complications.

**Results:** Out of 54, 7 patients (approx. 12.9%) of the patients had a variety of postoperative problems overall. With 3 (5.5%) of the patients experiencing surgery site infections, they were the most often occurring complication. These infections most certainly resulted from things like poor wound care or contamination during the surgical operation. Furthermore, 2 (3.7%) of the patients had respiratory problems including atelectasis or pneumonia most likely connected to the anesthesia or underlying medical disorders. Only 2 (3.7%) of patients had cardiovascular problems like hemodynamic instability or arrhythmias, which might be related with the physical strain of the surgical operation. Most of these problems were controlled sensibly with suitable treatments. While respiratory problems including pneumonia or atelectasis were addressed with respiratory support, including oxygen treatment or mechanical ventilation as required, surgical site infections were usually treated with antibiotics to suppress the infection. Targeted cardiovascular drugs addressed cardiovascular issues such arrhythmias or hemodynamic instability, therefore stabilizing the patient's state. The medical staff kept close eye on the patients and customized the course of therapy to fit the particular requirements of every instance.

**Conclusion:** Some proportion of patients suffering from surgical site infections, respiratory problems, and cardiovascular complications. The results highlight the need of careful surgical technique, perioperative care and postoperative and close monitoring to uncover and control these problems early on.

**Key words;** Postoperative complications, surgical site infection, respiratory complications, cardiovascular complications

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#### Introduction

Postoperative complication is the phrase used to describe any negative effect directly resulting from a surgical operation<sup>1</sup>. Most postoperative issues arise from organs failing to operate when oxygen delivery to their cells

does not meet demand. Preventing problems comes first and, physiologically, this may be seen as giving cells enough glucose and oxygen to satisfy their energy needs. This happens when human heart is able to generate sufficient systole to distribute variable oxygenated blood to the tissues. Pre-operative

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assessments of patients help to identify individuals who are more likely to have low oxygen levels or organ low blood circulation after surgery, therefore optimizing the current situation of circumstances as well as guiding the proper postoperative surveillance (e.g., the admission to an ICU)<sup>2</sup>.

In surgery, a wound disease is a kind of infections contacted in the hospital during an admission for purposes unrelated to the illness. After UTIs, second most are infections at the surgical areas often occurring as originating, hospital-acquired diseases.

Surgical Site Infections (SSIs) have grown to be a serious public health concern globally and help to significantly contribute to the morbidity and death rates in individuals. For doctors all over, a treatment barrier is the increase in immunity to drugs associated with SSIs. Study conducted at Ayub Teaching Hospital surgical departments<sup>3</sup> showed that following heart surgery, infectious complications occur in 5% to 21% of patients. Major infection problems postponed recovery and more than five times increased surgical mortality<sup>4,5</sup>.

It has just been shown that a loss in lung capacity resulting from the activation of stomach muscles during the process of anesthesia onset causes atelectasis by itself which increases the morbidity due to respiratory problems. Early management or prevention of issues with breathing problems might therefore help to improve the prognosis in patients undergoing surgery<sup>6</sup>.

One may avoid up to sixty percent of SSI with excellent general cleanliness and operational purity. Significant decrease of SSIs reduced mortality rates and a less costly health system<sup>7</sup>. Pre-operative, intra-operative, and postoperative steps may be performed to lower the likelihood of an SSI<sup>8</sup>. Minimizing infections mostly depends on careful patient assessment, exact surgical technique, and a coordinated attempt to lower risk factors all during the perioperative period<sup>9</sup>.

Rapid recovery is the aim of complication treatment; thus, typically a multi-disciplinary

approach with senior surgeon advice is needed<sup>10</sup>.

## Objectives

- To investigate the frequency and treatment of acute postoperative problems encountered by patients within the Department of Sur-gery at Imran Idrees Teaching Hospital in Sialkot was the main aim of this cross-sec-tional research.
- To evaluate the frequency of surgical site infections, respiratory problems, and cardio-vascular complications as well as the techniques used to quickly find and fix these problems during the postoperative period.

## Methodology

This was a cross-sectional study conducted at the Department of Surgery at Imran Idrees Teaching Hospital in Sialkot, Pakistan. The study population included all patients who underwent surgical procedures within the department over a 20-day period from 1st May to 20th May, 2024.

## Results

Out of 54, 7 patients (approx. 12.9%) of the patients had a variety of postoperative problems overall. With 3 (5.5%) of the patients experiencing surgery site infections, they were the most often occurring complication. These infections most certainly resulted from things like poor wound care or contamination during the surgical operation. Furthermore, 2 (3.7%) of the patients had respiratory problems including atelectasis or pneumonia most likely connected to the anesthesia or underlying medical disorders. Only 2 (3.7%) of patients had cardiovascular problems like hemodynamic instability or arrhythmias, which might be related with the physical strain of the surgical operation. Most of these problems were controlled sensibly with suitable treatments. While respiratory problems including pneumonia or atelectasis were addressed with respiratory support, including oxygen treatment or mechanical ventilation as required, surgical site infections were usually treated with antibiotics to suppress the infection. Targeted cardiovascular



drugs addressed cardiovascular issues such as arrhythmias or hemodynamic instability, therefore stabilizing the patient's state. The medical staff kept close eye on the patients and customized the course of therapy to fit the particular requirements of every instance.

The associated complications are detailed in Table 1 below.

Age Group	No of Patients
20-25	6
26-30	9
31-35	10
36-40	13
41-45	5
46-50	6
51-55	3
56-60	1
61-65	0
66-70	1
Total = 54	

**Table 1: Distribution of patients across different age groups**

## Discussion

Emphasizing cardiovascular issues, a study of seven (7) patients demonstrated arrhythmias and hemodynamic instability after post-cardiovascular surgery. Notably, with hemodynamic instability, infections, CVA and Seizures were seen. An unexpected complication found that the convulsions and the unconventional epileptic seizures (NCSE) were more prevalent after aortic valve replacement (AVR) and CABG<sup>11</sup>.

Additionally, data emphasized the prevalence of pneumonia and atelectasis after the anaesthesia induced postoperative respiratory complication, which aligns with findings from a similar study identifying postoperative respiratory complications<sup>12</sup>.

Another study on comorbidities indicated smokers and diabetics had greater SSI risks, with our investigation also connecting surgical site infections to contamination and poor wound care. With percutaneous fixation especially, smoking increases risk<sup>13</sup>.

Last but not least, our study also addressed post-operative problems managed through focused therapy comprising oxygen, mechanical support, drugs, and antibiotics. In parallel, a study on Management of the common post-operative complications underlined the early detection and the

management need for a multidisciplinary approach as postoperative problems occur from a combination of patient-specific and surgery-specific elements<sup>14</sup>.

## Conclusion

Some patients had postoperative problems like surgical site infections, respiratory difficulties and cardiovascular issues. With constant monitoring and individualized care, effective treatments including antibiotics, breathing support, and targeted drugs were given.

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