International Journal of Medical Science in Clinical Research and Review
Online ISSN: 2581-8945
Available Online at https://ijmscrr.in/ Volume 7|Issue 06 (November-December) |2024 Page: 1252-1257

Case Series

Perioperative Anaesthetic Management of fracture femur in patients more than 60 years of age

Authors:
Dr. Paridhi Mehta[1], Dr. Mujeeb Rahman[2], Dr. Kurian P Thomas Vaidyan[3], Dr. Aruna Godwin[4], Dr. Suraj Jose[5],Dr. Shaji Sainudeen[6]
[1,2,3,5,6]*Senior Specialist, Department of Anaesthesia, Rashid Hospital, Dubai UAE*
[4]*Conslutant, Department of Anaesthesia, Rashid Hospital, Dubai UAE*
Corresponding Author*:*
Dr. Mujeeb Rahman, Senior Specialist, Department of Anaesthesia, Rashid Hospital, *Dubai UAE*

Article Received: 01- October -2024, Revised: 21-October-2024, Accepted: 11-November-2024

ABSTRACT:
Background-Rational for Clinical Audit Report: Patients age more than 60 years coming for fracture femur surgery have multiple comorbidities which can affect the anaesthetics management. These patients have a high incidence of perioperative mortality and morbidity which included postoperative delirium, hypoxia, pulmonary embolism, deep vein thrombosis, anemia, congestive cardiac failure, acute renal failure. It is recommended that these patients go for early surgery and mobilization. Rashid hospital, being a tertiary trauma center, gets high incidence of fracture femur in geriatric population. Proper optimization and intraoperative management is the key to early mobilization, discharge, decreased hospital stay and improved quality of life.

INTRODUCTION:

Overall Aim Includes:

To Improve:

- Patient health outcome
- Patient satisfaction
- Staff satisfaction
- Delivery of care
- Use of resources

Objectives:

- To identify number of patients taken for surgery within 48 hours of admission
- To identify various reasons for delay in surgery for more than 48 hours.
- To identify number of patients with intraoperative or postoperative complications.
- To prepare guidelines for preoperative optimization and intraoperative anaesthetic management for fracturefemur in patients with age of 60 years or more.

Key Questions:

- What is the percentage of patients who are taken for fracture femur surgery within 48 hours of admission?
- What are the factors causing delay for fracture femur surgery for more than 48 hours after admission?
- What is the incidence of intra and postoperative complications in patients with fracture femur with age 60years and above?
- Is there any difference in outcome with the use of regional/general anesthesia for fracture femur surgery?

METHODOLOGY:

- Femur fracture is one of the most common fracture occurring pathologically or following trauma in elderly population world wide.
- Data shows femur fractures in elderly were 1.66 million in 1990 and are expected to rise more than 6.26million by 2050.

- Rashid hospital Dubai, being a tertiary trauma center receives high incidence of such fractures in geriatric population (10 to 15 cases per month).
- These fracture are associated with high 1 year mortality. (11% to 39 %).
- A meta-analysis including 191,873 patients found that early surgery within 24-48 hours had significantlylower risk of death.

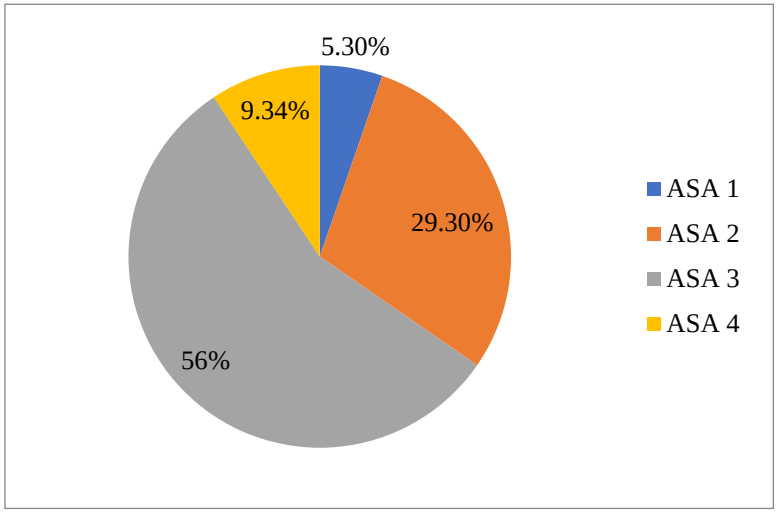
OBSERVATIONS:

- Total number of patients- 150
- Average age- 75 years
- Male: female- 68-82
- 150 patients of more than 60 years age with isolated fracture femur were audited retrospectively.

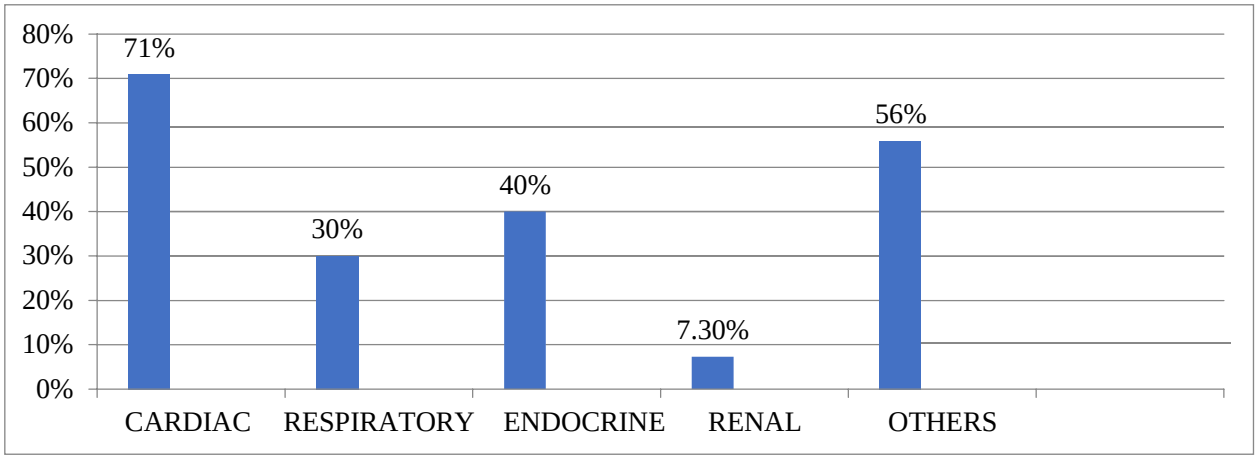
VARIABLE:

- Age
- Comorbidities
- ASA Status
- Time of readiness from anesthesia after information
- Time of surgery within 48 hours or more from admission
- Intra and postoperative complications
- Postoperative optimization
- Discharge
- Mortality within 6 months of the incidence

ASA GRADING:



COMORBIDITES:



Source of Standards:

- Professional Organizations guidelines
- Local guidelines/ protocols
- National Standards
- Observations of Current practice

Standards Sets:
Patients of fracture femur more than 60 years of age should be taken for surgery as early as possible preferablywithin 48 hours of admission.

Data Collection:
Source of data: (e.g. case notes, patients, observation of sessions) preoperative, intraoperative and postoperative anesthesia records, patients file:

Sample: randomized retrospective analysis.

Type of population: patients with fracture femur more than 60 years of ageSize: 150 Patients.

Sample Selection: 18 Months (December 2012 to September 2014)

Data Collection Process:
Data Collection Tool: specially designed tool, attached herewith. (e.g. interview, questionnaire, record form)

Type of Anaesthesia:

- General Anaesthesia using inhalational agents
- TIVA
- Regional Anaesthesia alone
- GA + Regional

Intra-Operative events/complications:

Intensive Care stay if any: Yes No
If yes Reason

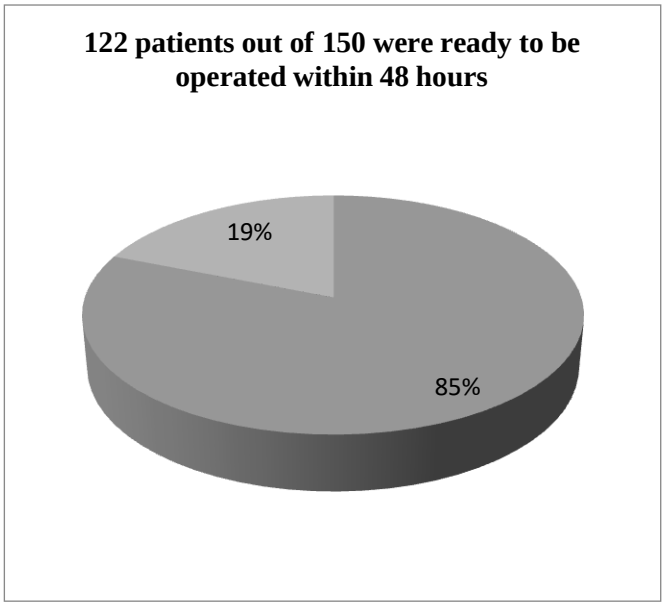
Post-operative Management:
Oxygen therapy: yes/no
Post-Operative anticoagulationts: yes/no
Post-Operative complications if any

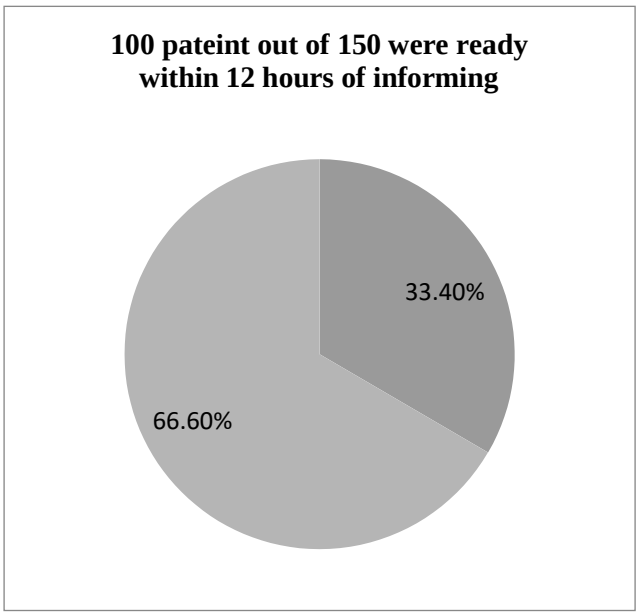
Time to postoperative mobilization after surgery

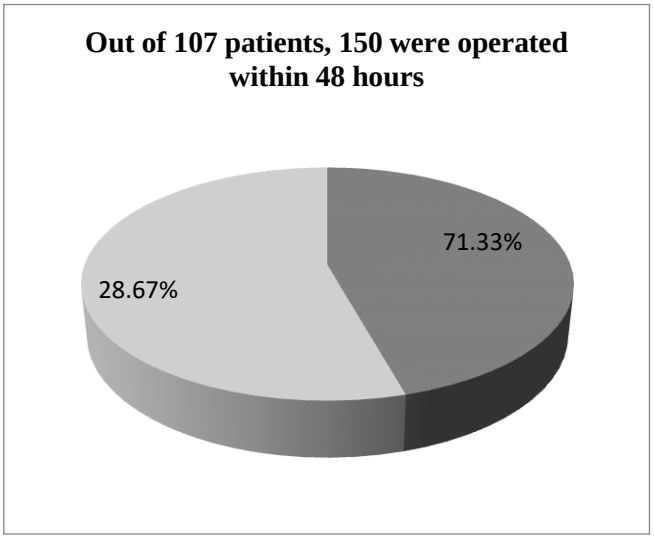
Data Analysis:
All data entered in Microsoft excel sheet and analysis done by descriptive analysis (multivariate)

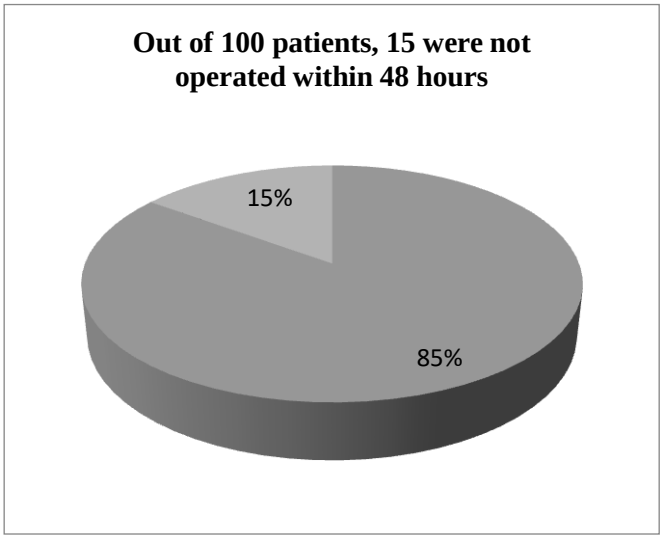
Key findings:

- Number of patients being taken for surgery within 48 hrs of admission 71.3%
- Reasons for delay: Medical 76.6%, administrative: 18.6%, both 4.6%
- Incidence of complications: 31.34%



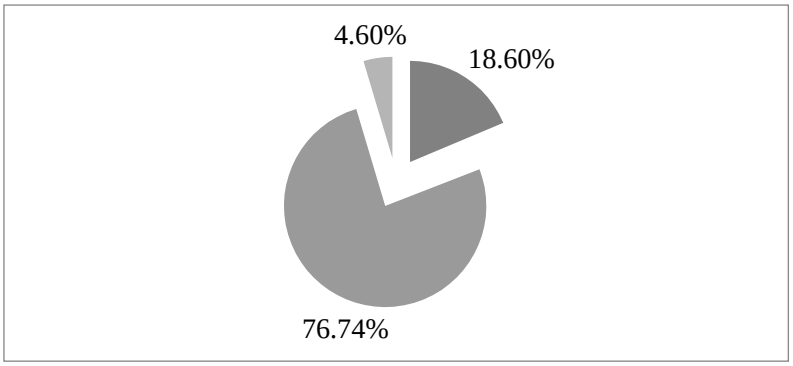






- 100 pateints were ready from anaesthesis side within 12 hours of informing.
- Out of these 100 patients, 15 patients were not operated upon within 48 hours of admission.
- Total of 122 patients out of 150 were made ready from anaesthesia side within 48 hours of admission.
- 107 patients out of 150 were operated within 48 hours of admission.

<u>Reasons for Surgery not Done within 48 hrs</u>.:



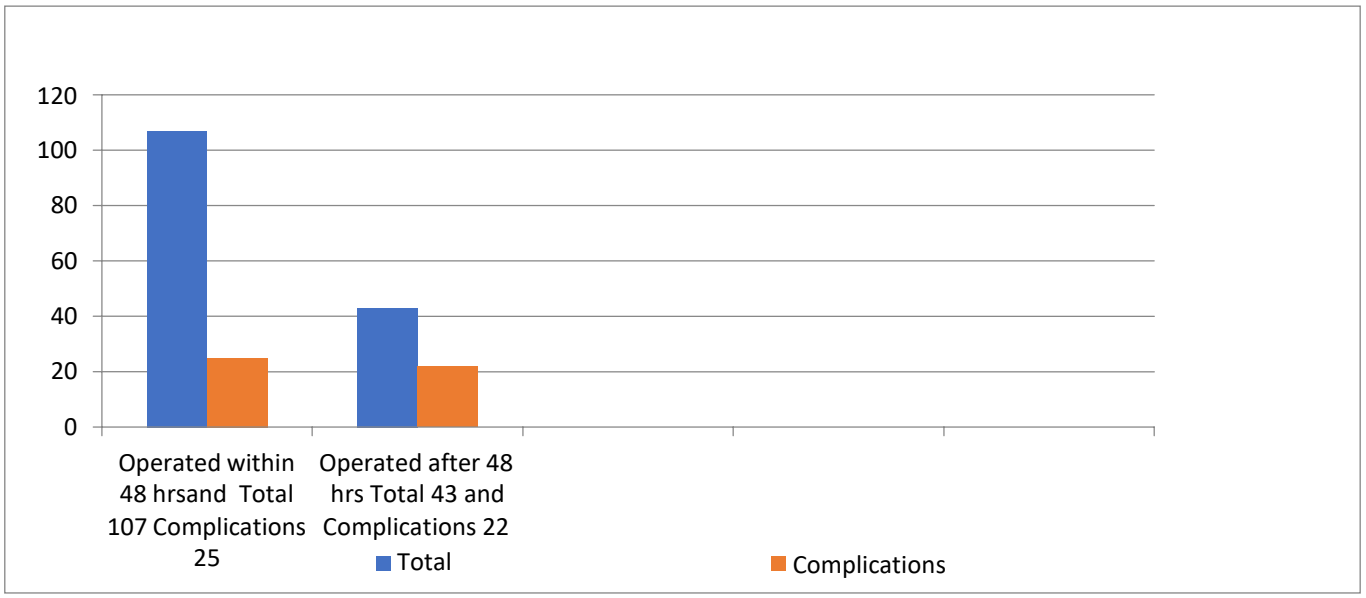
Reason for delay in surgery within 48 hours was mainly medical (76.6 % and administrative (18.6%) and both 4.60 %.

REASONS FOR DELAY:

MEDICAL	ADMINISTRATIVE
• Uncontrolled blood sugar • Uncontrolled blood pressure • Cardiac instability/ ECG changes • Medications e.g. clopidogrel, warfarin • Delay in investigations	• Unavailability of proper consent • Language barrier • Instruments not ready • Delay in decision for surgery

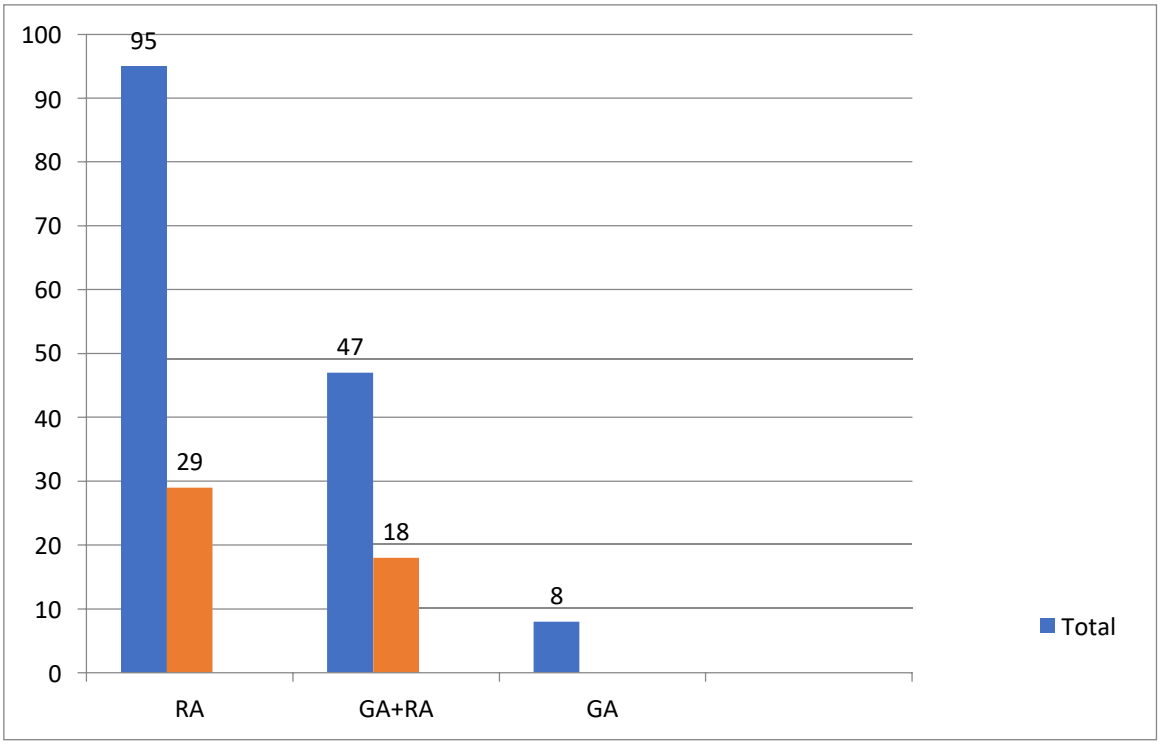
Complications:

Time of Surgery vs Complications



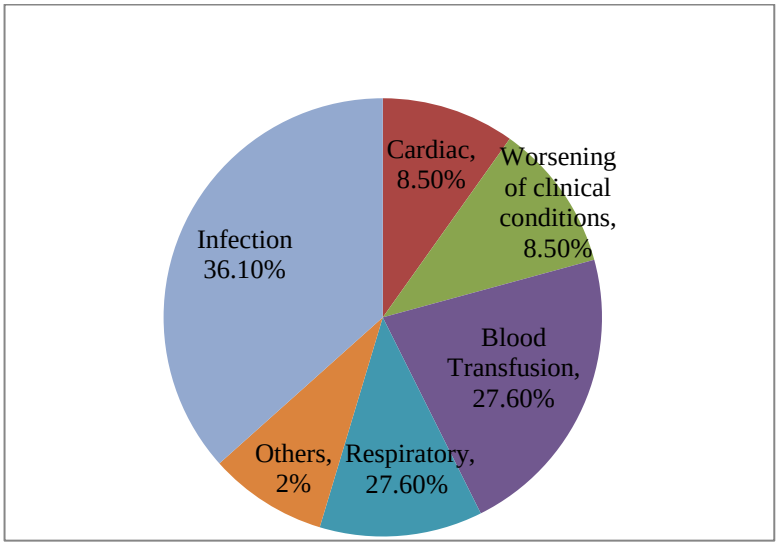
Percentage patient operated within 24 hrs (24 %) and operated after 48 hrs (51%)A Total of 47 patients had minor postoperative complications.

Type of Anaesthesia/ Complications:



Direct correlation between the type of anaesthesia and postoperative complications could not be found as there was ahuge disparity between the number of patients receiving the either.

Complications:



The Most Common complication found in postoperative period was infection followed by respiratory complicationsand blood transfusion.

Mortality:

5 cases of mortality within 6 months

AGE (YEARS)	ASA	READY WITHIN 12 HRS	OPERATED WITHIN 48 HRS	RA/RA+GA	COMPLICATION
84	3	YES	NO	SPINAL+FEM	
88	3	YES	YES	GA+FEM	Pulmonary Embolism
89	3	NO	NO	SPINAL+FEM	Worsening of medical condition
89	3	NO	YES	GA+FEM	
97	4	NO	YES	SPINAL+FEM	

No correlation could be found out between the 5 cases of mortality within 6 months of the incidence the time of surgery and the type of anaesthesia, but all these patients were in extremes of age and multicomorbid.

Suggestions for Change:

1. All patients with fracture femur and age group of 60 years should be optimized clinically as early as possible.
2. A Multidisciplinary approach should be followed right from the time of admission, irrespective of the surgicalplan.
3. These patients should be taken for surgery as early as possible, reducing both the medical and administrativereasons for delay.

SUMMARY:

- 107 Patients out of 150 were operated within the first 48 hours of admission
- We had both medical and administrative reasons for operative delay, medical reasons being more common.
- 47 patients irrespective of the time of surgery had minor or major postoperative complications.
- No definitive correlation could be found between the type of anesthesia and complications.

RECOMMENDATIONS:

- All the patients with fracture femur specially in elderly age group should be optimized clinically as early aspossible.
- A multidisciplinary approach should be followed right from the time of admission, irrespective of the surgicalplan.