

Study of preoperative assessment of geriatric patients of Telangana

Swapna T¹, G Shylakar Reddy^{2*}

^{1,2}Assistant Professor, Department of Anaesthesiology, Medciti Institute of Medical Sciences, Ghanapur, Medchal -501401, Hyderabad, Telangana, INDIA.

Email: swapnaresplendent@gmail.com

Abstract

Background: Geriatric patients represent fastest growing sector of society. Apart from health problems, they must be treated for cognition, psychiatric aspects also. **Methods:** The older patients above 65 years of age admitted for surgery were studied pre-operative. The routine blood and urine examination, x-ray, USG, nutritional status, previous history of illness was also recorded, physical fitness was certified by physician and cardiologist. **Results:** The clinical implication for anesthesia was 17(19%) had susceptible hypotension, 15(16.8%) susceptible to Hypercarbia and Hypoxemia 11(12.3%) had increased intra-operative Hyperglycemia, 7(7.86%) had increased risk of hypothermia, 13(14.6%) had anemia. The post operative check list was 25(28%) had delirium, 22(24.7%) had preoperative acute pain, 12(13.4%) had pulmonary complications, 9(10%) ability maintain adequate nutrition, 11(12.3%) had UTI, 10(11.2%) had pressure ulcer, types of anesthesia given was 58(65.1%) patients received regional anesthesia, 18(20.2%) epidural and local anesthesia, 13(14.6%) thoracic epidural anesthesia.

Key Words: Cognitive, Delirium nutrition, Epidural, Local anesthesia, Telangana

*Address for Correspondence:

Dr. Shylakar Reddy, Assistant Professor, Department of Anesthesiology, Medciti Institute of Medical Sciences, Ghanapur, Medchal - 501401, Hyderabad, Telangana, INDIA.

Email: swapnaresplendent@gmail.com

Received Date: 02/07/2019 Revised Date: 23/07/2019 Accepted Date: 19/08/2019

DOI: <https://doi.org/10.26611/1015111219>

Access this article online

Quick Response Code:	Website: www.medpulse.in
	Accessed Date: 24 August 2019

is more likely to lead failure of other organs². Hence these growing evidence base that many of these post-operative complication could be predicted through proactive understanding and management of their risk factors^{3,4}. Further geriatric patients require a different approach to their care, that is multidimensional and takes account of functional, cognitive, psychoactive and medical aspects of care in order to formulate a treatment and rehabilitation, plan involving team of medical faculty and family members of the patients.⁵ Hence attempt was made to study; the geriatric patients admitted for surgery, with age related complications with suitable anesthetic treatment and prevent the morbidity and mortalities.

INTRODUCTION

Geriatric patients with their increased incidence of co morbidities and deficits seen with aging, require special preoperative consideration like neuro-cognitive function, Sensory impairment, frailty, nutrition and medication. Delirium and preoperative acute pain were common preoperative complications¹. As older persons often have multiple co-morbid conditions that limit their functional capacity and recovery and increase risk of mortality. An initial complication is much more likely to lead other complication, failure of one organ to function adequately

MATERIAL AND METHODS

89 Geriatric patients above 65 years of age (aged between 65 to 90 year) admitted at Medciti Institute of Medical Sciences Hospital, Ghanapur – Medchal, Telangana were selected for study.

Inclusion criteria- The patients consented for surgery, average to good nutritional status with normal mental

status and physical examination was certified by physician were included in the study.

Methods- The patients agreed to undergo surgery. Their routine blood exam, X-ray and USG of the required region for surgery. The patients suffering with type-II D.M and Asthma were controlled pre-operatively. Their cardiac – evaluation was also recorded. Previous history of any surgery trauma illness was also noted. The duration of this study was about 4 years (2014 to 2018)

Exclusion criteria – The patients having malignancy, immune- compromised, grade IV malnourished. The patients had history of mental- illness and under treatment anti depressants and anti-anxiety were excluded from the study.

Statistical analysis- The clinical implication for anesthesia in geriatric patients were classified with percentage, post-operative check-list in post-operative patients were classified with percentage. A type of anesthesia given in different surgery in geriatric was classified with percentage. The ratio of the male and females was 2:1.

OBSERVATION AND RESULTS

Table-1. Clinical implication for Anesthesia in geriatric patients 17(19.1%) were susceptible to Hypotension 15(16.8%) were susceptible to Hypercarbia and Hypoxemia 11(12.3%) had increased intra-operative hyperglycemia 7(7.86%) had increased risk of 13(14.6%) were anemic.

Table-2. Post-operative check-list in Geriatric patients- 25(28%) had delirium 22 (24.7%) had preoperative acute pain, 12(13.4%) had pulmonary complications 9(10%) were ability to maintain adequate nutrition, 11(12.3%) had UTI post-surgically. 10(11.2%) had pressure ulcer.

Table-3. Types of Anesthesia in Geriatric patients- 58(65%) had regional anesthesia included repair hipbone, knee Arthroplasty and lower limb revascularization. 18(20.2%) had epidural with local anesthesia for abdominal surgery including abdominal aortic aneurysm repair, 13 (14.6%) had Thoracic epidural anesthesia for cardiac and pulmonary surgeries.

Table 1: Clinical Implication for Anesthesia In Geriatric Patients (No of Patients -89)

Sl.No	Particular	No of patients	Percentage (%)
1	Susceptible to Hypotension	17	19.1
2	Susceptible to Hypercarbia and Hypoxemia	15	16.8
3	Increased intra-operative hyperglycemia	11	12.3
4	Increased risk of hyperglycemia	07	7.86
5	Anemia	13	14.6

Table 2: Post-operative check-list in Geriatric patients(No of Patients -89)

Sl.No	Evaluations	No of patients	Percentage (%)
1	Delirium	25	28
2	Perioperative acute pain	22	24.7
3	Pulmonary complication	12	13.4
4	Ability to maintain adequate nutrition	09	10.1
5	UTI Infection	11	12.3
6	Pressure ulcer	10	11.2

Table 3: Types of Anesthesia in Geriatric patients(No of Patients -85)

Sl.No	Types of Surgery	Types of Anesthesia	No of patients	Percentage (%)
1	Repair hipbone, knee Arthroplasty and lower limb revascularization	Regional Anesthesia	58	65.1
2	Abdominal surgery including abdominal aortic aneurysm repair	Epidural with Local Anesthesia	18	20.2
3	Thoractomy	Thoracic Epidural Anesthesia	13	14.6

DISCUSSION

In the present study of preoperative Assessment of Geriatric patients of Telangana- The clinical implication were 17(19%) were susceptible to hypotension, 15(16.8%) susceptible to hypercarbia and hypoxemia 11(12.3%) had intraoperative hyperglycemia 7(7.86%) increased risk of hypothermia, 13(14.6%) had Anemia (Table-1). In post-operative check list study - 25(28%)

had delirium 22 (24.7%) had preoperative acute pain, 12(13.4%) had pulmonary complications 9(10%) were ability to maintain adequate nutrition, 11(12.3%) had UTI post-surgically. 10(11.2%) had pressure ulcer. (Table-2) Types of Anesthesia in Geriatric patients- 58(65%) had regional anesthesia included repair hipbone, knee arthroplasty and lower limb revascularization. 18(20.2%) had epidural with local anesthesia for abdominal surgery

including abdominal aortic aneurysm repair, 13(14.6%) had Thoracic epidural anesthesia for cardiac and pulmonary surgery (Table-3) These finding were more or less in agreement with previous studies^{6,7,8}. Delirium was the multi factorial disorder characterized by impaired attention and disorganized thinking that frequently occurs in the preoperative setting in geriatrics, which increased length of hospital stay increased health care cost, post-operative cognitive physiologic change in a geriatric patients that may impact drug response includes impaired gastro-intestinal absorption, decreased hepatic and renal blood flow, increased adipose tissue decreased total body water and decreased muscle mass. These factors impact drug Pharmacokinetics and Pharmacodynamics leading to adverse perioperative events¹⁰. Surgery and the recovery process create a hyper metabolic state that taxes the reserve any patients but can be particularly dangerous in geriatric patients. The mal nutritious patients especially geriatrics had increased risk of infection, poor wound healing, wound break down, lengthier hospital stay and mortality¹¹. In addition to this the medical histories of geriatric patients include physical social and neuropsychological condition. It was also reported that trails examining improving muscle mass with angiotension enzymes converting inhibitors hormones such as testosterone or supplements like vitamin D have not resulted in the expected benefits. Hence risk and benefits of the surgery should be predicted before surgical approach in geriatric patients.

SUMMARY AND CONCLUSION

The present comparative study of preoperative assessment of geriatric patients will be useful to surgeons, and anesthetists for decisions making for rational treatment choice after considering one's medical conditions the desired procedure, potential benefits and

potential risk should be evaluated because nowadays reputation of medical profession is at stake.

REFERENCES

- 1- Justin G. Knittel, Troy S. Wilders – pre-operative Assessment of Geriatric patients Anesthesiology- cli 2016,34, 171-183.
- 2- Tulay Ershan, William. A. skewer management of the geriatric preoperative Anesthesiology. Clion- 2006, 34, 717-183
- 3- Allen. C Glastial P. Del marc- Bed rest, potentially harmful treatment needing more care careful evaluation, Lancet 1999,354, 1229-53.
- 4- Leing J.M Danke.S- Relative important of preoperative health status versus interpretive factors- in predicating post-operative adverse out comes in geriatric surgical patients J. Ann-Geriatric Sci-2001. 49, 1050-5
- 5- Rubenstein L Z Struck A E- Impacts of Geriatrics evaluation and management programmed on defined out comes over view of the evidence J Am Geriatric Sc. 1991,39,85-168.
- 6- Ellis. G white head MA – comprehensive geriatric assessment for older adults admitted to hospital Cochrane data base system R W. 2011(7) 28-32
- 7- Ellis Q.G, M spires, Coutts. S- Pre-operative assessment in elderly evolution of a new clinical service Scottish med jour. 2012. 012,1-5
- 8- Chandrika Kumar. Broke Salzman Jessica L Colburn- Preoperative Assessment in older adults A comprehensive Approach Http://fp.org/fo12018/0815/p214.html. Viewed on 3rd July 2019.
- 9- Inounyes.k , Western drop RGJ. Delirium in elderly adults Lancet 2014, 383(9920)911-22
- 10- Bressler R, Bhal elderly patients mayo cliin Proc. 2003,78 (12), 1564-77
- 11- Hiesmayr M, Sechindirk – Decreased food intake is a risk factor for mortlity in hospital patients, the nutrition dig survey 2006, clin. Nutr. 2009, 28 (5) 484-91
- 12- Sumukads. D, Bandim – Do ACE inhibitors improve the response to exercise training in functionally impaired older adults A randomized controlled trail J. Gero national A. Bol. Sc .Med. 2014, 69(6), 736-43.

Source of Support: None Declared
Conflict of Interest: None Declared