

Clinical Profile of Unknown Geriatric Patients in a Tertiary Care Hospital

Saraswathi. B¹, Ujjwala.V², Radha Mohan. M^{3*}, Ramesh. R⁴, Sridhar. M.S⁵

¹Assistant Professor in General Medicine, Government Medical College, Nizamabad, Telangana, India

²Assistant Professor in General Medicine, RIMS, Kadapa, Andhra Pradesh, India

³Associate Professor in Pediatrics, Government Medical College, Nizamabad, Telangana, India

⁴Professor in General Medicine, S.V. Medical College, Thirupathi, Andhra Pradesh, India

⁵Principal and Professor, Department of General Medicine, S.V. Medical College, Thirupathi, Andhra Pradesh, India

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Abstract

Background: A large number of unknown patients without any personal, family, or other identification details represent a unique problem in the health services of developing countries like India in a context of legal, humanitarian, and treatment issues. These patients pose a diagnostic and management challenge to treating physicians and staff. There are sparse data on these patients. This study provides a systematic evaluation of the current state of knowledge in this area. **Aim:** To estimate the proportion of unknown geriatric patients admitted in our hospital and to study the clinical profile and outcome of these unknown geriatric patients. **Materials and Methods:** This is retrospective observational study conducted in a Tertiary Care Hospital, Andhra Pradesh, India from October 2015 to October 2016. All patients attending our hospital who don't have attenders to look after and patients who don't have nominal identity and age > 60 year are taken into study. **Results:** In this study we have examined 47 (n=47) unknown geriatric patients in one year. Most of them are in age group 60 -70 yr (80.85%). Most common working diagnosis found is altered sensorium (Delirium) due to metabolic causes and infections (16/47). Most of the unknown geriatric patients are admitted in AMC (26/47). The major outcome observed in our hospital is death. 38 out of 47 are expired. 16 out of 38 expired in first 24 hr and most common cause of death observed is metabolic disorder (47.3%). **Conclusion:** We have done retrospective chart review of all Unknown patients from October 2015 to October 2016, who are brought to our hospital. Clinical and sociodemographic characteristics and clinical outcome of the sample are analyzed. Our findings demonstrate metabolic causes, and infections are the primary reasons for admission of unknown patients to our hospital. This pattern can be useful to guide the approach of healthcare providers in India.

Keywords: Unknown Patients, Geriatric Patients, Identity, Attenders, Metabolic Disorder, Head Injury, AMC, Neurosurgery, Outcome.

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Introduction

Unknown patients are patients who are unable to provide identifying information at the initial point of contact in the facility due to various disorders. Their names would remain unknown until their identity gets established during the treatment process. Thus, an unknown patient can be defined as "the patient whose identity cannot be ascertained at the time of arrival to the hospital[1]" These patients are usually brought to hospitals by 108 and other public responders when these patients are found on road side. Addressing the problem of unknown patients who are attending health care system requires a proper understanding of various disorders, as well as factors such as patient's access to care, adherence to treatment, and follow-up.

Aim

To estimate the proportion of unknown geriatric patients admitted in our hospital and to study the clinical profile and outcome of these unknown geriatric patients.

Review of Literature

There are sparse data on these patients.

Haradhan Deb Nath et al 2011, Department of Neurosurgery at Jai Prakash Narain Apex Trauma Centre (JPNATC), All India Institute of Medical Sciences (AIIMS), New Delhi studied

*Correspondence

Dr. Radha Mohan. M

Associate Professor in Pediatrics, Government Medical College, Nizamabad, Telangana, India.

E-mail: kavitha.mohan8@gmail.com

1. "Outcome of head injury in unknown patients at Level-1 apex trauma centre". Out of 70 patients, 68 (97%) were male, most were in the age group of 21–30 years 25 (36%). The mean age was 33.7± 14.6 years (range 5–70 yrs). Mean duration of hospital stay was 27.9±52.2 days (range 2–368 days). During the course of treatment identity of 51 (73%) patients could be established. Nine patients (12%) remained unknown and on recovery were sent to destitute homes for rehabilitation[15].
2. Achary Umesh et al. 2017, National Institute of Mental Health and Neuro Sciences, Bengaluru, Karnataka, India in their study "Unknown Patients and Neurology Casualty Services in an Indian Metropolitan City: A Decades Experience" A total of 151 unknown patients were admitted during the 10 years. Out of these, 134 (88.7%) were males with the mean age of 43.8 ± 14.8 years and 95 (63%) were aged >40 years. Among them, 147 (97.4%) were from the urban vicinity, 126 (83.6%) were brought by police and 75 (49.7%) were registered as medico-legal cases. Out of these, only 3 (2%) patients had normal sensorium, whereas 101 (66.9%) presented with loss of consciousness. Forty-one (27.2%) unknown patients had a seizure disorder, 37 (24.5%) had metabolic encephalopathy, 26 (17.2%) had a stroke, 9 (6%) had neuro-infection, and 17 (11.3%) had a head injury. Deranged liver functions were seen in 65 (43%), renal derangement in 37 (24.5%), dyselectrolytemia in 42 (27.8%), and abnormal brain imaging finding in 95 (62.9%) patients. Furthermore, there were 14 (9.3%) deaths[14].

Studies were heterogeneous with regard to populations, outcomes, and methodological quality. Further studies are required.

Materials and Methods

This is retrospective observational study conducted in a tertiary care hospital, Andhra Pradesh, India. Duration of study is one year, from October 2015 to October 2016. All unknown patients are taken into study but the description and results are applied only for geriatric unknown hospital admissions.

Inclusion criteria

- All patients who don't have attenders to look after and patients who don't have nominal identity and age > 60 year.
- Patients having nominal identity but don't have attenders to take care.

Exclusion criteria

- Patients those who are admitted as unknown patients and after admission have got attenders.
- Unknown patients taking treatment on OP basis or brought dead.

Study Procedure

Initially proportion of geriatric patients admitted in our hospital is calculated. The proportion of unknown geriatric patients among the above population is calculated later. History is taken as detailed as possible and thorough clinical examination is done. All possible relevant investigations are also done. The clinical profile and hospital outcome of these unknown geriatric patients is observed. If the patient is dead the cause or disease process for such outcome is also found.

Results

During one year of study period 47 unknown geriatric patients are found out of 44421 total admissions. Male to female ratio of unknown geriatric patients is 4:1. Our observations are as follows.

Table.1: Admission Details

| S.No. | Admissions | Number |
|-------|--------------------------------------|--------|
| 1. | Total Admissions | 44421 |
| 2. | Geriatric Patients | 6002 |
| 3. | Unknown Patients | 257 |
| 4. | Unknown Geriatric Patients | 47 |
| 5. | Deaths in Unknown Geriatric Patients | 38 |

In this study we have examined 47 (n=47) unknown geriatric patients as mentioned above (Table.1). Most of them are in age group 60 -70 yr. Frequency distribution of age is shown below.

Table.2: Age Distribution – Frequency (n=47)

| S.No. | Age Group | No. of Patients | Percentage |
|-------|--------------|-----------------|------------|
| 1. | 60 – 70 year | 38 | 80.85 % |
| 2. | 70 - 80 year | 7 | 14.90 % |
| 3. | 80 – 90 year | 2 | 4.25 % |

80.85 % patients are between 60 to 70 year. (Fig.1)

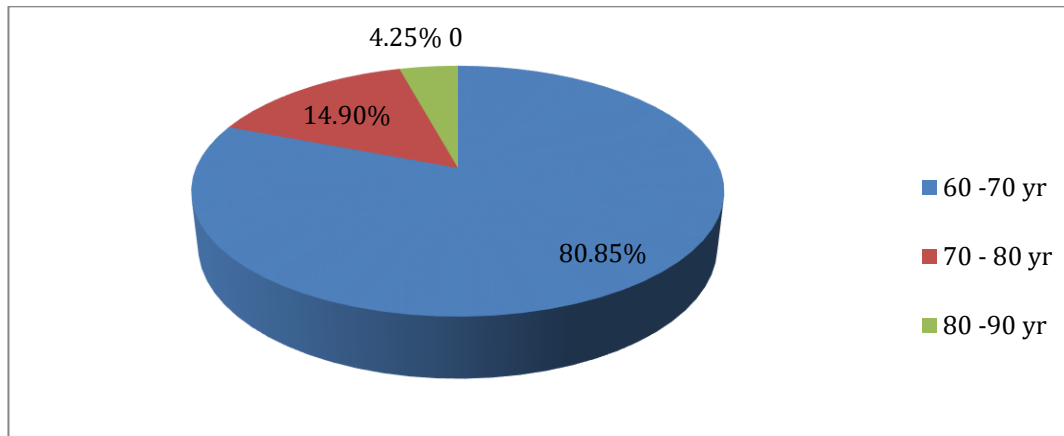


Fig.1: Age Distribution (n=47)

Most common working diagnosis found is altered sensorium (Delirium) due to metabolic causes and infections (16/47). Disease profile is shown in the following table. (Table.3).

Table.3: Disease profile (n=47)

| S.No. | Disease | Number |
|-----------|---|-----------|
| 1. | Altered Sensorium (Delirium) Due to Metabolic Causes and Infections | 16 |
| 2. | Head Injury | 6 |
| 3. | Cerebro Vascular Accidents (CVA) | 6 |
| 4. | Road Traffic Accidents | 5 |
| 5. | Fractures | 4 |
| 6. | Cellulitis | 2 |
| 7. | Gastroenteritis | 2 |
| 8. | Poisoning | 1 |
| 9. | Diabetes Keto Acidosis | 1 |
| 10. | Others | 4 |
| 11 | Total | 47 |

Ward wise distribution of unknown geriatric patients (n=47) is mentioned in Table.4

Table.4: Ward Wise Admissions (n=47)

| S.No. | Ward | No. of Admissions |
|-------|-----------------------------------|-------------------|
| 1. | AMC (Acute Medical Care) | 26 |
| 2. | IDH (Infectious Disease Hospital) | 2 |
| 3. | Leprosy | 1 |
| 4. | Medicine | 1 |
| 5. | NS | 9 |
| 6. | Orthopedics | 4 |
| 7. | Surgery | 4 |
| 8. | Total | 47 |

Most of the unknown geriatric patients are admitted in AMC followed by Neuro surgery department. (Fig.2)

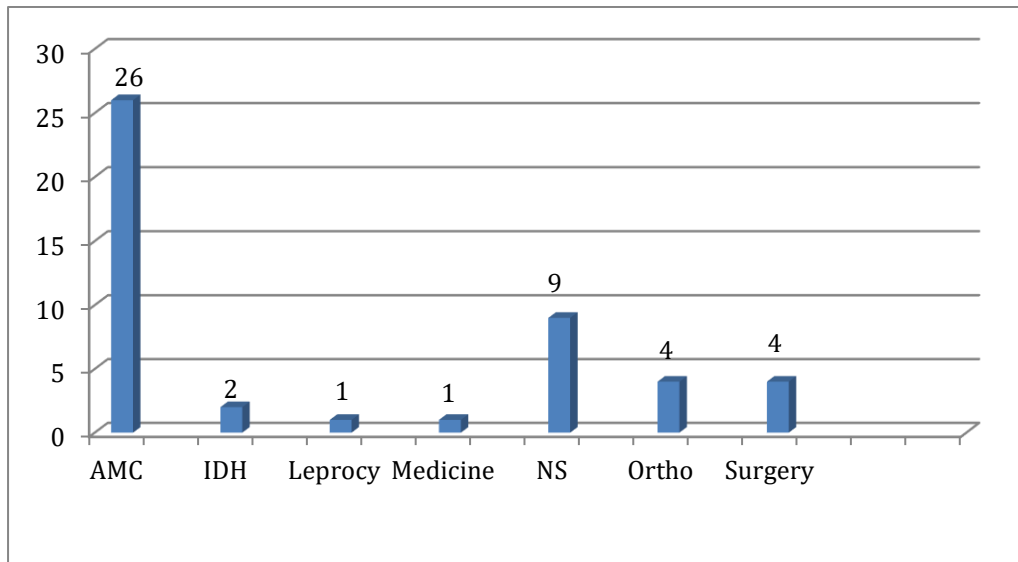


Fig.2: Ward Wise Distribution (n=47)

Outcome of Hospital Admissions

The major outcome observed in our hospital is death. 38 out of 47 are expired. 5 patients are discharged from hospital and 3 absconded. One patient is still present in the hospital.

Frequency distribution of death time after admission among total 38 deaths is as follows. (Table.5)

Table.5 Frequency Distribution of Death Time after Admission (n=38)

| S.No | Death Time after Admission | No. of Deaths |
|------|----------------------------|---------------|
| 1. | Within 24 hr | 16 |
| 2. | 24 – 48 hr | 3 |
| 3. | 48 hr – 7 days | 4 |
| 4. | 7 days – 1 month | 10 |
| 5. | More than 1 month | 5 |
| 6. | Total | 38 |

Most of deaths are seen within 24 hr of admission i.e. 16 out of 38 (Fig.3).

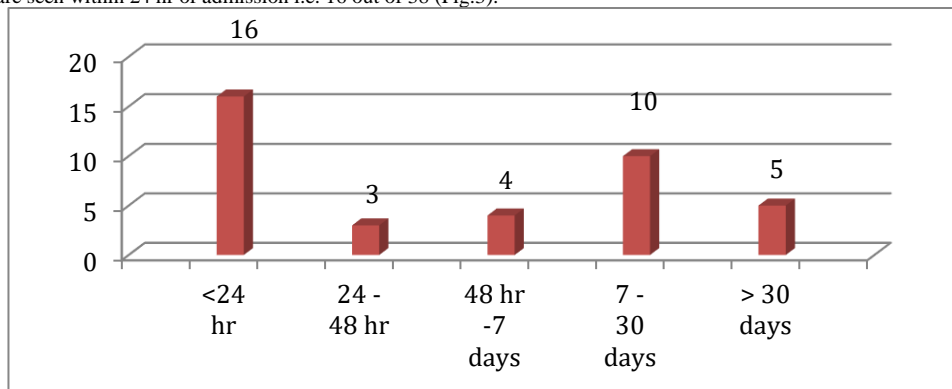


Fig.3: Frequency Distribution of Death Time after Admission (n=38)

Cause of death in these unknown geriatric patients who are admitted in this hospital is found and distributed in the following table. (Table.5)

Table.5: Cause of Death (n=38)

| S.No. | Cause of Death | Percentage |
|-------|--------------------|------------|
| 1. | Metabolic disorder | 47.3 % |
| 2. | Cardiac arrest | 31.5 % |
| 3. | Aspiration | 15.7 % |
| 4. | Shock | 5.5 % |

In majority of the cases with death as outcome the cause of death is metabolic disorders constituting 47.3 % (Fig.4).

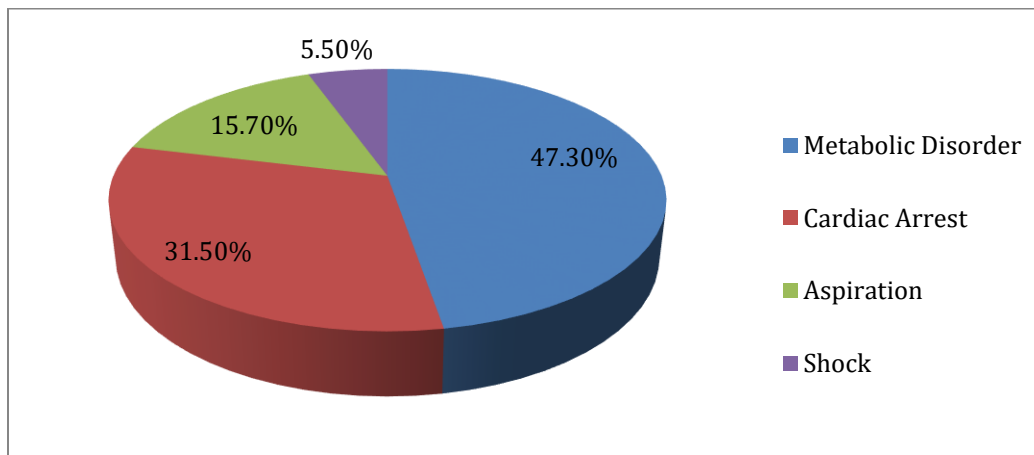


Fig.4: Cause of Death (n=38)

Death due to shock constitutes 5.5 % and includes septic shock as well as hypovolemic shock.

Discussion

We have examined 47 unknown geriatric patients in our hospital which is tertiary care centre during a period of 1 year from Oct-2015 to Oct- 2016. Male to female ratio of unknown geriatric patients is 4:1. Most common age group is 60 - 70 yr. Most of the unknown geriatric patients are admitted in AMC followed by Neuro surgery department.

Very few studies are available on these patients to compare our results. Some of the related articles are searched for data[2].

Haradhan Deb Nath et al 2011, Department of Neurosurgery at Jai Prakash Narain Apex Trauma Centre (JPNATC), All India Institute of Medical Sciences (AIIMS), New Delhi studied "Outcome of head injury in unknown patients at Level-1 apex trauma centre". Out of 70 patients, 68 (97%) were male. Though identity of 51 (73%) patients could be established, 9 patients (12%) remained unknown and on recovery were sent to destitute homes for rehabilitation[15].

Achary Umesh et al. 2017, National Institute of Mental Health and Neuro Sciences, Bengaluru, Karnataka, India in their study "Unknown Patients and Neurology Casualty Services in an Indian Metropolitan City: A Decades Experience" a total of 151 unknown patients were admitted during the 10 years. They demonstrate seizures, metabolic causes, neuro-infections and head injury were the primary reasons for admission of unknown patients. There were 14 (9.3%) deaths[14]. Our study shows similar disease profile but outcome is different. The major outcome observed in our hospital is death. 38 out of 47 are expired. In majority of the cases with death as outcome the cause of death is metabolic disorders constituting 47.3 %. Furthermore we have observed disease profile and outcome of unknown geriatric patients in Government General Hospital, Nizamabad another Teaching Hospital in Telangana from Jan-2019 to Dec 2020. The results and observations of our study are similar but outcome is different[16]. Our study shows more death rate than others.

Merits and Demerits

This study has been done in a Tertiary Care Centre which is a Teaching Hospital. Team approach is there and enquiry has been done regarding cases brought by police or 108 ambulances to aid the diagnosis. Before confirming diagnosis patient is examined carefully

and necessary investigations are done. All the investigations are available in our institution and reliability is good. Faculty of General Medicine, Neurosurgery, and Radiology are always available for helping in diagnosis and treatment. Statistical analysis is done with the help of Faculty of Preventive and Social Medicine.

However, these patients usually don't have history regarding illness and will not be in a state to communicate. At most very few investigations are being done to these patients. Lack of working staff and the access to labs is difficult due to practical issues. Though identity of some unknown patients is established during the treatment process, they are continued to be in the study when attenders are lacking. More over this study is conducted upon patients, who are brought to our hospital. Thus our findings may not represent the exact picture in the population.

Recommendations

Though most of the unknown geriatric patients are admitted with treatable causes the outcome is poor due to lack of attendees, nutrition, proper lab work up, ambulatory support. The need of extra care provision, adequate staff, ambulatory aid, rehabilitation care is necessary to have a better outcome in these patients. There is a need for the development of new supervised operational procedure or policy/guidelines to register unknown patient data to ensure safety, care and to provide appropriate management and to prevent potential medico-legal problems. This should be done with the cooperation of hospitals and the government[14]. There is a need to upgrade ourselves in term of taking fingerprints and biometric to improve identification accuracy of unknown. MLC to be done in all unknown patients especially who are in altered sensorium[14].

To the best of our knowledge, there is no data on unknown patients presenting to health service in India. There are no systematic studies in world literature on this subgroup of unknown patients. Further studies are required to evaluate socio demographic, clinical profile, and short-term follow-up of unknown patients admitted in the emergency department and factors influencing course and outcome of illness.

Conclusion

Our study highlights about the clinical profile, the pathway of care, outcome of the disorders in the unknown geriatric patients. In our

study we observe most of the unknown geriatric patients are admitted to AMC followed by Neurosurgery department[3,4,5]. Most common working diagnosis found is altered sensorium due to metabolic causes and infections. Most of these unknown geriatric patients are not undergone complete evaluation. The major outcome is death and cause of death in these patients is metabolic disorder.

The finding from this study will help in the development of guidelines, decreasing the morbidity and mortality of unknown patients by improving resources and to develop training in handling this special group. There is a need for national guidelines for emergency department teams regarding the management of unknown patients.

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