



Original Article


Study of ethnicity of acute pancreatitis in Sikkim

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ABSTRACT

Aims and Objective: To find out the ethnicity of acute pancreatitis in Sikkim.

Material and Method: This hospital based retrospective study was conducted by collecting 18 months data of acute pancreatitis patients admitted in gastroenterology department, tertiary care hospital in Sikkim. The collected data of 18 months from August 2024 till January 2026 was analysed using Microsoft Excel.

Result: There was a total of 77 patients admitted during the study period. Out of 77 patients, there was 39 Chettri ethnic group followed by 11 Bhutia, 6 Lepcha, 5 Rai, 3 Tamang, 3 Gurung, 2 Sherpa, 2 Limboo and 9 Others ethnic group.

Conclusion: The most common ethnic group of acute pancreatitis in our study was found in Chettri ethnic group.

Keywords: Acute pancreatitis, Ethnicity, Sikkim.

INTRODUCTION:

Acute pancreatitis (AP), characterized by inflammation of the pancreas, it is a critical medical condition with potentially life-threatening consequences (1). The clinical range of acute pancreatitis (AP) is wide and includes mild episodes that resolve on their own to severe, potentially deadly conditions that include organ failure and systemic inflammation (2).

Even though there are significant advancements in medical science, the prognosis of AP is influenced by a multitude of factors. Out of these factors, ethnicity has emerged as a compelling variable that may play an important role in determining the outcomes and severity of AP (3). Understanding the influence of ethnicity on AP outcomes has immense importance for several reasons. First of all, it may provide an opportunity to understand the pathophysiology of the disease, shedding light on variations in the inflammatory response among individuals with different ethnic backgrounds (4). Second, it can help the physicians for guiding treatment strategies, ensuring that medical interventions are tailored to patients of various ethnicities (5). Very few ethnic study was done in association with acute pancreatitis. By untangling the intricate relationship between ethnicity and the clinical presentation of AP, we aimed to study and understand this complex condition.

Sikkim, being a northeastern Himalayan state of India, is a multi-ethnic society inhabited by different ethnic communities belonging to different racial and linguistic groups. The Anthropological Survey of India had identified 21 different communities in Sikkim and more than 13 different languages belonging to different linguistic stock are spoken in the state (6).

METHODOLOGY:

This retrospective study of ethnic correlation with acute pancreatitis was conducted by collecting data from the department of gastroenterology, Sir thutop Namgyal Memorial Hospital for a period of eighteen months from August 2024 till January 2026. The patient ethnicity, age, sex, demographic profile, clinical presentation, serum amylase, serum lipase, ultrasound findings, computed tomography findings, magnetic resonance cholangiopancreatography, arterial blood gas analysis was recorded. Statistical analysis was done by using Microsoft Excel. Ethical clearance was taken from the institute.

RESULT:

There was a total of 77 patients admitted during the period of 18 months from August 2024 till February 2026. The male to female sex ratio was 2.20 (Table no.1). The age group in the study range from 21 yrs of age till 84 years. The median age among the study group was 41 years. The most common ethnic group presenting with acute pancreatitis was Chettri (44.15%) followed by Bhutia (14.28%), Lepcha (7.79%), Rai (6.49%), Tamang (6.49%), Gurung (3.89%), Sherpa (2.59%), Limbo (2.59%) and others (11.68%) (Table no 2). The most common etiology was alcohol (50.64%) followed by gallstone (42.85%), triglyceridides (3.89%), chronic kidney disease (2.59%), drug induced (1.29%) (Table no 3). Majority (96.10%) of the patients was managed conservatively in the ward and 3 patients (3.89%) required intensive care unit admission however there was no any mortality.

Table No.1 .Sex ratio

Gender	Total number
Male	53
Female	24

Table no 2.Ethnic distribution of acute pancreatitis patients.

Ethnicity	Total numbers of acute pancreatitis patients distribution	Percentage
Chettri	34	44.15%
Bhutia	11	14.28%
Lepcha	6	7.79%
Rai	5	6.49%
Tamang	3	3.89%
Gurung	3	3.89%
Sherpa	2	2.59%
Limboo	2	2.59%
Others	9	11.68%

DISCUSSION:

This hospital based retrospective study provides a valuable insight into the ethnicity of acute pancreatitis prevailing in Sikkim, a himalayan state marked by distinctive demographic and cultural features. The present population of Sikkim is composed of different races and ethnic groups, viz., the Lepchas, the Bhutias, the Nepalis and the Plainsmen. The Bhutias constitute 8.57%, Lepchas 7.94%, Limbus 9.79%, Tamangs 6.8%, Sherpas 4.45%, Magars 2.69%, Rais 13.4%, Gurungs 5.87%, Yakkhas 0.003%, Jogis 0.46%, Sunuwar 0.65%, Thamis 0.09%, Bhujels 0.6%, Khas or Bahun 6.96%, Khas or Chettris 12.22%, Pradhans 3.73%, Kamis 4.25%, Damais 1.96%, Sarkis 0.2% and others 9.34% of the total population of Sikkim. The Rai is the single largest ethnic community in Sikkim followed by the Chettris. (7).

Among the 77 study patients of acute pancreatitis, the most common ethnic group was Chettri (44.15%) compared with rest of ethnic group prevalent in Sikkim. Chettris ethnic groups are distributed all over Sikkim, except in the north and their villages are often situated on hill slopes covered with thin forests at an altitude between 3000 feet to 6000 feet. A land-owning community, agriculture is their main occupation. They are mostly small and marginal farmers and are engaged in terrace cultivation of agricultural and horticultural crops, and animal husbandry. However, a number of them are in Government service as administrators, school teachers, and bank employees. Chettri cultivators (as per the Socio-Economic Census (2006), DESME, Government of Sikkim) were 13.25% of all cultivators. (8) Chettris are non-vegetarians but abstain from eating red meat except mutton.

Among the etiology of AP in our study, alcohol consumption was the most common cause followed by gallstones. This pattern reflects findings from other Indian regions but also highlights regional gender-specific trends and risk profile (9). Our study shows alcohol-induced acute pancreatitis (50.64%) in line with patterns seen across northern and northeastern India, where alcohol use remains prevalent, particularly among male (10). Similar findings from multicentric studies have shown that over 40% of male patients with AP in India suffer from alcohol-related disease (11). This underscores the urgent need for community-based alcohol cessation programs as a public health priority in such regions.

Gallstone-induced pancreatitis (42.85%) was the second most frequent etiology and showed a clear female predominance. This trend mirrors global data and Indian studies suggesting gallstones are a leading cause of AP in women (12). Contributing factors may include local dietary habits rich in fats and carbohydrates, as well as possible genetic predispositions (13). Hypertriglyceridemia accounted for 3.89% of cases, an emerging trend in urbanizing parts of India where metabolic syndrome, diabetes, and obesity are on the rise (14).

CONCLUSION: The findings of the present study shows that the most common ethnic group associated with acute pancreatitis was Chettri ethnic group. The most common etiology was alcohol followed by gallstones.

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