

Severity and Symptoms of Reflux Esophagitis in Older Patients in Nepal: A Hospital Based Cross-Sectional Study

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Abstract

There is a conflicting view regarding the association between severity and symptoms of reflux esophagitis in older patients, and to date, no such information has been made available in Nepalese subjects. Therefore, the present study is conducted to compare the symptoms and severity of reflux esophagitis in older subjects of different ages.

Setting and Design: This was a single centered hospital based cross-sectional study in a consecutive 164 subjects, conducted at gastroenterology department at Bir Hospital in Nepal. Patients were divided into three groups according to age: young adults (ages 18-40 years); middle aged adult (ages 41-60 years); older adults (ages above 60 years). The severity of reflux oesophagitis was graded according to the Los Angeles classification. Univariate comparisons between 2 groups of subjects, with and without symptoms, were made using Chi square test for categorical data. A P value of less than 0.05 was set as a level of significance.

Results: Among 164 enrolled subjects, forty seven were young adults (age 18-40), 74 were middle aged adults (age 41-60), and 43 were older adults (age > 60). Proportion of male population was higher than that of female (99 Vs 65), and 25.6% male subjects were young adults, 26.82% were middle aged adult and 18.9% were older adult. No statistically difference in sex distribution among the three different age group were found ($p = 0.123$). Most of the symptomatic subjects were middle aged adults (37.19%) followed by the older adults (25.60%) and young adults (22.56%). Statistics showed a significant association between age distribution and symptoms ($p = 0.025$). Grade B reflux esophagitis was most prevalent in middle aged adults (33.53%). Disease severity was not significantly linked with older subjects with different ages ($P > 0.05$)

Conclusion: Severity of the disease towards different older ages patients are null. However, Tendency of symptomatic esophagitis in older patients with different ages is significant; suggesting that symptoms in young and middle aged older patients should be emphasized as a need of care.

Keywords: Los Angeles Classification; Older Patients; Reflux Esophagitis; Symptoms

Introduction

Gastroesophageal reflux disease (GERD) manifesting symptoms are common. Manifestations of GERD range from mild episodes of heartburn and acid regurgitation, without esophagitis, to chronic mucosal inflammation with erosive esophagitis and ulceration, complicated in severe cases by stricture and bleeding [1,2]. Although it is unclear whether the incidence and prevalence of GERD symptoms increase with aging, several studies have suggested that

frequency of esophagitis is significantly higher in older people than in adult or young subjects. Indeed, old age was found to be a significant risk factor in the development of severe forms of GERD in epidemiological and clinical studies from United States [3,4] Japan [5] and Europe [6].

Available studies appears that among young or middle-aged subjects, 36% have regurgitation or heartburn at least once a month, 14% suffer from symptoms weekly, and 7% have daily

symptoms [7]. In an unselected population sample, Symptoms suggestive of gastroesophageal reflux were found among 25% of the participants, in respective of age [8]. The prevalence of esophageal dysfunction [9] and hiatal hernia [10] increases with age. Because GERD is strongly associated with both of these [11], it is expected that the prevalence of GERD might in increased with age.

Information regarding the incidence and clinical features of reflux oesophagitis in the older adults in Nepal is rare. The elderly patient can present with atypical symptoms, sometimes failing to show any symptom, such as myocardial infarction occurring without anterior chest pain [6]. Therefore, to identify the clinical characteristics of reflux oesophagitis in the older adults' subjects in Nepal; its incidence, severity and symptoms were investigated and were further compared with those of younger and middle aged adults patients.

Methods

Setting and design

This was a single centered hospital based cross-sectional study conducted at gastro department at Bir Hospital in Nepal. Patients who underwent an upper gastrointestinal endoscopy and who were diagnosed with erosive esophagitis were considered for eligible in the study.

Symptoms recording

A structured interview was performed to identify and record gastrointestinal and extragastrointestinal symptoms indicating endoscopy. The questionnaire examined about the following symptoms: heartburn, dysphagia, water bash, odynophagia, burning, hiccups, nausea, vomiting, chest pain, dyspepsia, respiratory symptoms, and belching. Heartburn and regurgitation were considered typical symptoms of GERD, and if either of these was present, the participant was considered as suffering from symptomatic gastroesophageal reflux.

Patients were divided into three groups according to age: young adults (ages 18-40 years); middle aged adult (ages 41-60 years); older adults (ages above 60 years). The severity of reflux esophagitis was graded according to the Los Angeles classification [12]: grade A, one or more mucosal breaks, each no longer than 5mm; grade B at least one mucosal break more than 5mm long but not continuous between the tops of two mucosal folds; grade C, at least one mucosal break that is continuous between the tops of two or more mucosal folds, but is not circumferential; grade D, circumferential mucosal break.

Statistical analysis

All numerical data were expressed as mean ± SD. Univariate comparisons between 2 groups of subjects, with and without

symptoms, were made using Chi square test for categorical data. Age group was evaluated both categorically and as a continuous variable. Stepwise logistic regression was used to identify independent predictive factors for reflux esophagitis. A P value of less than 0.05 was set as a level of significance. Study protocol was approved by the ethical committee of National Academy of Medical Science, Bir Hospital.

Results

The demographic characteristics of the population are illustrated in figure 1 and 2. A total of 164 subjects were enrolled for the study. Forty seven subjects were young adults (age 18-40), 74 were middle aged adult (age 41-60) and 43 were older adults (age > 60)

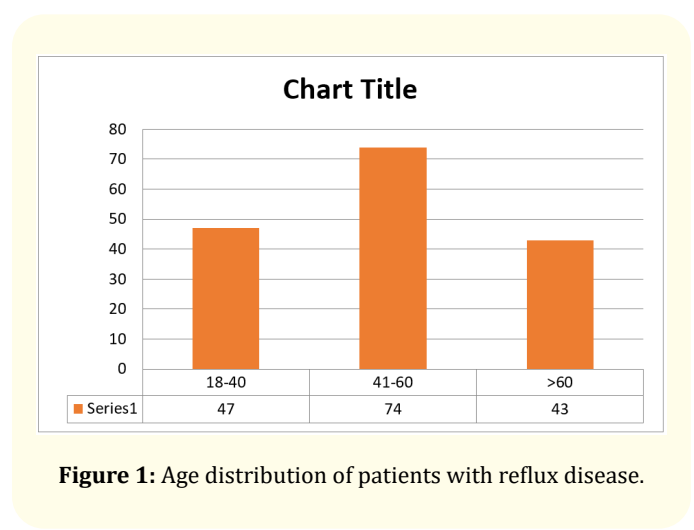


Figure 1: Age distribution of patients with reflux disease.

Age distributions according to sex are shown in figure 2. Statistics showed that proportion of male population was higher than that of female (99 Vs 65), and 25.6% male subjects were young adults, 26.82% were middle aged adult and 18.9% were older adult. No statistically difference in sex distribution among the three different age group were found (p = 0.123).

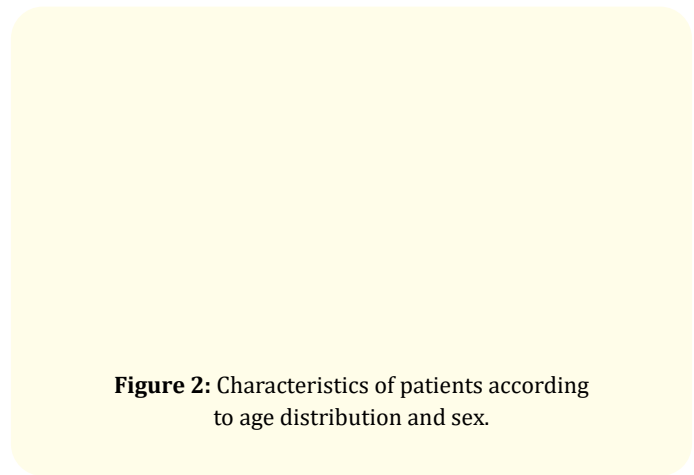


Figure 2: Characteristics of patients according to age distribution and sex.

Age	Symptoms (+)	Symptoms (-)	P
18-40	37 (22.56)	10 (6.25)	0.025
41-60	61 (37.19)	13 (7.92)	
>60	42 (25.60)	1 (0.06)	

Table 1: Status of reflux symptoms according to age group distribution.

Note: (+) indicates symptoms present; (-) indicates symptoms absent

Characteristics of the age group according to symptoms are illustrated in table 2. To investigate the difference in symptoms among the different age group, the subjects were investigated for the presence or absence of typical symptoms of reflux esophagitis (heartburn and/or regurgitation). Most of the symptomatic subjects were middle aged adults (37.19%) followed by the older adults (25.60%) and young adults (22.56%). There was a significant association between age distribution and symptoms as showed by the Pearson’s Chi square test (p= 0.025).

	Age			P (χ ²)
	18 - 40	41 - 60	>60	
	N (%)	N (%)	N (%)	0.128
Grade A	13 (7.9)	13 (7.9)	11 (6.7)	
Grade B	12 (7.3)	33 (20.12)	55 (33.53)	
Grade C	20 (12.19)	26 (15.85)	12 (7.3)	
Grade D	2 (1.2)	2 (1.2)	5 (3.00)	

Table 2: Disease severity based on Los Angeles classification and age distribution.

Note: (χ²): Chi square

Bivariate analysis demonstrated that young adults subjects (OR: 11.35; CI: 1.38-92.93) and middle aged adults subjects (OR: 8.95; CI: 1.12-71.05) were associated with high risk of reflux symptoms. As is showed in age as continuous variable, odd of risk associated with symptoms insignificantly decreased by 13% with an increase of age (OR: 0.973; CI: 0.943-1.004).

We also evaluated disease severity based on age wise distribution. Grade B was most prevalent in middle aged adults (33.53%) followed by older adult patients (20.12%). Grade A remained fairly same for all age groups subjects, while prevalence of Grade D was least in all age categories (Table 3). The association performed by Pearson’s Chi square test between disease severity and ages were not statistically significant (P > 0.05).

Age (categorical)	B	SE	P	OR	95% CI	
					Lower	Upper
18 - 39	2.42	1.073	0.024	11.35	1.38	92.93
40 - 60	2.19	1.057	0.038	8.95	1.12	71.05
>60	-	-	-	-	-	-
Age (continuous)	-.027	0.016	0.088	0.973	0.943	1.004

Table 3: Bivariate analysis for reflux symptoms with age distribution.

Discussion

Very limited information is available regarding the status of reflux esophagitis in terms of severity or its relation with symptoms in elderly population. The present study evaluates the relationship between the severity and symptoms of the reflux disease in different three age groups: (young, aged 18-39 years); (adult, aged 40-60 years), and older adults aged above 60 years, with an endoscopic diagnosis to reflux esophagitis. Our study resulted that 47 subjects were young (age 18-40), 74 were adult (age 41-60) and 43 elder (age >60). This study demonstrated that the relative prevalence of grade B esophagitis was insignificantly higher in older patients than younger, while the relative prevalence of grade C esophagitis relatively higher in younger subjects. This result indicates that reflux esophagitis in Nepalese non -older tends to be more severe than those of older adults.

Our study demonstrated that different age group are significantly linked to the symptomatic GERD, and regression analysis revealed that younger or middle aged group tends to be significantly associated with symptomatic GERD. However, few studies suggest the higher prevalence of symptomatic GERD in older adults than in young or middle age group patients [7,8]. The discrepancy in the findings are in the fact that the study population and methodology applied in the cited articles are differ from the present study, as there are less number of elder patients enrolled in the analysis.

In a study concordance with our findings conducted by Sung Hung Jung [13] found that younger subjects tended to have symptoms during the follow-up period and the proposed hypothesis is that the older patients are thought to have a higher pain threshold [14]. The finding indicates that physicians must not rely on only symptoms as a predominant tool for diagnosis, but should go further for esophagoscopy and either pH monitoring or scintiscanning so as to make accurate diagnosis.

However, few studies suggest the higher prevalence of symptomatic GERD in older adults than in young or middle age group

patients [7,8]. The discrepancy in the findings are in the fact that the study population and methodology applied in the cited articles are different from the present study, as there are less number of elder patients enrolled in the analysis.

Conclusion

Young adult subjects and middle aged were appeared with high risk of reflux symptoms, indicating that physicians caring the young and middle aged older patients should aware of the symptoms. Disease severity is not significantly linked with ages with different group. Further study in a large population should explore the tendency of disease severity on ages with different age group.

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Conflict of Interest

Authors declare that they do not have conflict of interest

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