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Research Article

### EOSINOPHILIC ESOPHAGITIS FREQUENCY IN THE PATIENTS EXPERIENCING UPPER GASTROINTESTINAL ENDOSCOPY

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**Abstract:**

**Objective:** The objective of this research work is to find out the EoE (Eosinophilic Esophagitis) frequency in the patients who are undergoing upper gastrointestinal endoscopy (UGIE).

**Methodology:** The patients who were UGIE for any sign exposed to biopsies of esophagus for the conclusion of the EoE. The protocol of additional biopsy was 2 from each stomach, duodenum, distal esophagus & proximal esophagus. The availability of greater than fifteen eosinophils in only 1 field of high power was the standard for the eosinophilic esophagitis diagnosis.

**Results:** Exact 94 patients were the part of this research work in accordance with the estimations of the size of samples. EoE was available in only seven (7.40%) patients who underwent UGIEs.

**Conclusion:** EOE is the active detection in the availability of the suggestive signs & symptoms.

**Key Words:** Protocol Esophagitis, Duodenum, Gastrointestinal Endoscopy, Estimations, Proximal, Vomiting.

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## INTRODUCTION:

EoE is very new term in the gastroenterology. The report of EG (eosinophilic gastroenteritis) presented in 1937 for the very first time by Kaijser R & used by Ureles AL in 1961 after it. Landres RT gave the first elaborated report of the eosinophilic esophagitis in 1978 [1-3]. Eosinophilic esophagitis can exist with variations of different sign including vomiting, pain in chest, and impactions of the food, dysphagia & reflux [4]. In recent times, it is very vital detection in the patients suffering from dysphagia [5, 6]. Mostly, patients find with other associated complications as breathing issues, atopic dermatitis or some kinds of allergies [7, 8]. It copies the behavior of GERD (Gastro Esophageal Reflux Disease) & it can be the reason of the strictures of esophagus [9-12]. Allergy of food & an especial T helper type-2 profile of cytokine documented among the various causes of the cause of the disease [13, 14]. Eosinophilic esophagitis shows itself as hypersensitivity reaction driven by an antigen [14].

The detection of the eosinophilic gastroenteritis considered in those patients who found with the past background of the impaction of food, tenacious dysphagia & patients with the past atopy. The FIGERS better known as first international gastro-intestinal eosinophilic research symposium stated that a greater than 15 per HPF count of eosinophil with the ordinary biopsies of gastric & duodenal has the ability to authenticate the detection of f eosinophilic gastroenteritis [15]. The taxonomy esophagitis by Los Angeles established the uniformity in the presentation of esophagitis with the help of endoscope which is available below [16];

Grade-A: 1 or more break of mucosal not greater than five millimeters, that have no extension among the peak of 2 folds of mucosal.

Grade-B: 1 or more break of mucosal greater than five-millimeter-long that have no extension among the peaks of 2 folds of mucosal.

Grade-C: 1 or more than 1 break of mucosal that is incessant among the peaks of 2 or more folds of mucosal but it includes circumference of < 75.0%.

Grade-D: 1 ore more than 1 break of mucosal which have the involvement of minimum 75.0% circumference of esophagus.

In our medical experimentation, we see many patients with nags same to the eosinophilic esophagitis but we found no authentic published report of these patients from our country, Pakistan. There was a deficiency of knowledge about this complication in the medical professionals. This research work conducted to know about the rate of

eosinophilic esophagitis in the patients who underwent UGIE. This study will give the information about the seriousness of this issue. It will provide us with a record of the baseline information of eosinophilic esophagitis for future case studies. It will provide benefit to aware the professionals to treat this horrible complication.

## METHODOLOGY:

All the patients of both sex having age from 18 to 90 years who were undergoing UGIE in Allied Hospital Faisalabad were the part of this research work. All the participants gave the consent to participate in this study. Patients detected with gastro intestinal malignancies, females with pregnancy, EoE & EG were not the part of this work. The information of the demography of all the patients gathered. Sample of blood for laboratory testing withdrew. One consultant performed the endoscopies for every patient. The classification of LA was in use to elaborate the leveling of erosive esophagitis [16]. Any further biopsies or dilatation recorded on the advice of endoscopic expert.

Extra biopsies for the research work conducted according to protocol of the research work. Biopsies gathered with the help of ideal forceps of biopsies. Biopsies kept in the solution of ten percent fomaline & sent for histopathology at the very similar day. Only one specialist evaluated and concluded the specimens of the biopsies. The detection standard for eosinophilic esophagitis was availability of greater than fifteen eosinophil in only one field of microscope with high power. The calculation of the sample size conducted from currently concluded occurrence of eosinophilic esophagitis of 6.50% in the patients who were undergoing endoscopy [17]. Analysis of the collected information carried out with the help of PASW V. 18.0.

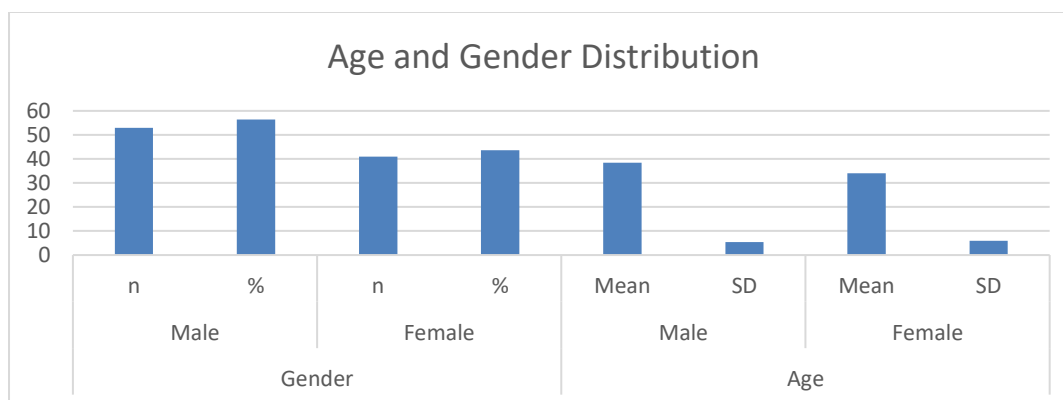
## RESULTS:

About 94 successive patients who were undergoing UGIE (Upper GI Endoscopies) in our institution who were fulfilling the study standard were the part of this research work. Fifty-three were the male patients and forty-one were female patients. Average age of male patients was  $38.40 \pm 5.40$  years while the mean age of female patients was  $34.10 \pm 6.0$  years. The average hemoglobin level was  $10.30 \pm 4.10$  gm/dl, the amount of platelets was  $190 \pm 50 \times 10^9$  per  $\text{mm}^3$  & INR was  $1.120 \pm 0.920$ . The biopsies of 7.40% patients were reliable with the detection of eosinophilic esophagitis & 1.1% of eosinophilic gastroenteritis, 2.1% patients of Barrett's esophagus and eleven patients were present with esophagitis which was nonspecific. The clinical traits of 7

patients which had confirmed as eosinophilic esophagitis (EoE) are present as under. Male to female ratio was 5: 2 with an average male age of

$39.10 \pm 3.30$  years while the mean age of females was  $33.90 \pm 4.10$  years.

Table 1: Patients Age and Gender Distribution							
Gender				Age			
Male		Female		Male		Female	
n	%	n	%	Mean	SD	Mean	SD
53	56.4	41	43.6	38.4	5.4	34.1	6



Some grade of dysphagia was present in all 7 patients & 2 patients complained about the stickiness of the food in which was glide down with the help of water during eating. One male and all females were the acknowledged sufferers of asthma & they were under medication for the treatment this disease. Transverse ridges in the esophagus which are well-acknowledged as feline esophagus detected with the help of endoscopy in all seven patients and only one patient was present with small spots of white color in the esophagus which are well-acknowledged as micro-abscesses.

### DISCUSSION:

Eosinophilic esophagitis is very recent and not frequent detection in the medical field. This is the first research work of this kind in our country Pakistan. It is a clinic pathological disorder considered as an extensive variation of gastro esophageal reflux disease like signs, dysphagia & nausea that happen in the combination with thick esophageal eosinophilia. This is very frequent outcome linked with the gastro esophageal reflux disease, eosinophilic esophagitis, syndrome of hyper eosinophilic, IBD & celiac disorder. No outcomes of the development of the diseases in the history of the patients, or testing in laboratory, endoscopy, or the results of histology elaborate the EoE. We concluded its rate of 7.40% in the patients who were undergoing

UGIE & this figure cannot be same if the interrogation of the patients carried out with esophageal eosinophilia as active deliberation in distinct detection. It is frequently an unnoticed detection sin the patients having the disease of dysphagia [18, 19].

Females were not so much in quantity as compared to males as in this research work, 76.0% patients were males [15]. Most of the research works showed allergic reasons of the disease as a proof from the reality that majority of the patients found with some allergic abnormalities as asthma, dermatitis & availability of antigen of allergy [15]. The division of allergy of food consists three categories (1) mediated IgE, (2) non IgE mediated (3) or the blend of both of these types. Contact of a hereditarily susceptible person to a suitable diet gives the creation of the particular allergen IgE which gives the result in the shape of allergic sensitization [20]. The part of the Eotaxin-3 in the evolution of the disease of eosinophilic esophagitis remained as well recorded [21]. Interleukin-15 mediates in the evolution of the eosinophilic esophagitis. Interleukin-15 activates the T cells of CD4+ to create the cytokines that perform on the eosinophils [22]. Many radiological research works showed that only esophagus caliber is not less in the patients suffering from eosinophilic esophagitis but the dispensability of the esophagus is also less in

the patients of eosinophilic esophagitis [23, 24]. Uniformity & the hyalinization are the main fibrosis's features, while the GERD fibrosis has an association with the tissues of lymph [25].

### CONCLUSION:

Eosinophilic esophagitis is an allergic esophagus complication and it is a disease which is easily treatable. This disease is also easily diagnosable in the patients.

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