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A study on clinicopathology and treatment outcome of laryngopharyngeal reflux.

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Abstract:
Objectives :To analyze the demographic, clinicopathological and treatment aspects of laryngopharyngeal reflux disease.
Materials and Methods: Prospective institutional based observational study over a period of January 2020 to December 2020 in the department of ENT, Burdwan Medical College, Burdwan. This study includes 100 cases who presented with laryngopharyngeal reflux disease during the study period. The patients of both sex, age more than 18 years were included in the study and patients who did not give consent were excluded from the study.
Results: The age of patient with laryngopharyngeal reflux disease in the study group ranged from 20 to 70 years and most commonly affected age group is 31 to 40 years age range which is 27%. Males were more commonly affected than female with a ratio of 1.4 : 1.1. The commonest symptoms were sensations of something sticking in throat or lump in throat followed by clearing of throat. On laryngeal endoscopy, posterior commmissure hypertrophy is most commonly seen followed by erythema or hyperaemia. Early sleeping after meal followed by high spices consumption are most common risk factor for laryngopharyngeal reflux disease. By behavioural modification and empirical medical treatment of three months trial of gastric acid suppression, 74% patients are completely relieved, 18% patients are partially relieved and 8% patients has no response to treatment.
Conclusion: Laryngopharyngeal reflux disease is highly prevalent among patients attending OPD services at Burdwan Medical College & Hospital, West Bengal. Commonest presentation is something sticking in throat and commonest finding is posterior commissure hypertrophy. Main modality of treatment oflaryngopharyngeal reflux disease is behavourial modification and three months trial of gastric suppression
Keywords: Laryngopharyngeal reflux disease; Sticky sensation; Gastric suppression.

I. INTRODUCTION:

Laryngopharyngeal reflux disease is an inflammatory reaction of the mucosa of pharynx, larynx and other associated upper respiratory organs, caused by a reflux of stomach contents outside the oesophagous.[1] Presence of laryngopharyngeal reflux disease is around 31% in general population.[6] The implication of laryngopharyngeal reflux disease in many common head and neck symptoms, along with the rising cost of empiric therapy and no overall improvement in patient symptoms has established a need to review what are indeed laryngopharyngeal complains secondary to reflux and what are not.[2] The diagnosis is usually based on a combination of diagnostic signs and symptoms, which cannot be explained by pathology other than laryngopharyngeal reflux disease.[3] A diagnosis of laryngopharyngeal reflux disease is usually based on response on symptoms to empirical treatment, a 3 month trial of high dose proton pump inhibitor twice daily.[4] Failure to respond to a 3 month trial of behavioural change and gastric acid suppression by adequate dose of proton pump inhibitor medication dictates need for confirmatory studies like multichannel intraluminal impedance and pH monitoring studies.[5]

II. MATERIALS AND METHODS:

This study is a prospective institutional based observational study over a period of January 2020 to December 2020 in the department of ENT, Burdwan Medical College, Burdwan. This study includes 100 cases who presented with laryngopharyngeal reflux disease during the study period. The patients of both sex, age more than 18 years were included in the study and patients who did not give consent were excluded from the

study.

The enrolled patients were assessed thoroughly on the following pattern: detailed history, clinical examination and relevant investigation. There is no pathognomonic symptoms or finding but characteristic symptoms and laparoscopic findings provide basis for validated assessment instrument (The Reflux Symptom Index and Reflux Finding Score) useful in initial diagnosis. The Reflux symptom index of >13 and Reflux Finding Score of >7 suggests laryngopharyngeal reflux. A diagnosis of laryngopharyngeal reflux disease is usually based on if patient is respond well for empirical treatment, 3 months trial of behavioural change and gastric acid suppression by adequate dose of proton pump inhibitor.

Here, 2 approaches are taken to confirming the diagnosis of laryngopharyngeal reflux. First is patient's response of symptoms to behavioural change and medical management. Second is fibre optic laryngoscopic examination of mucosal injury.

III. RESULTS:

The age of patient with laryngopharyngeal reflux disease in the study group ranged from 20 to 70 years and most commonly affected age group is 31 to 40 years age range which is 27%. Most patients were in the 3rd to 6th decades of life. Males were more commonly affected than female with a ratio of 1.4 : 1.1. The commonest symptoms were sensations of something sticking in throat or lump in throat followed by clearing of throat. Least common presentation is difficulty in swallowing food, liquids or pills. On laryngeal endoscopy, posterior commmissure hypertrophy is most commonly seen followed by erythema or hyperaemia. Ventricular obliteration is least common finding. Early sleeping after meal followed by high spices consumption are most common risk factor for laryngopharyngeal reflux disease and least common risk factor is obesity. By behavioural modification and empirical medical treatment of three months trial of gastric acid suppression, 74% patients are completely relieved, 18% patients are partially relieved and 8% patients has no response to treatment.

IV. DISCUSSION:

Laryngopharyngeal reflux disease is a common chronic inflammatory disease and highly prevalent in patients attending ENT OPD of our hospital. Reflux Symptom Index and Reflux Finding Score scales are used to screen patients for disease, so as to clinically assess the symptoms and signs of patients.

In the study conducted, 100 cases of laryngopharyngeal reflux disease were evaluated. The age of patient with laryngopharyngeal reflux disease in the study group ranged from 20 to 70 years the most commonly affected age group was 31 to 40 years age range which was 27% . Study conducted by Massawe et al. revealed that most commonly affected age group was 28 to 37 years which was 24.2% which is consistent with our study.[7] Males were commonly affected than females, with the male to female ratio of 1.4 : 1.1 which is consistent with the study conducted by Massawe et al. where male to female ratio was 2.5 : 2.2.[7] The most common clinical presentation was sensation of something sticking in throat or lump in throat (78%). Clearing of throat was second most common symptom (66%). Least common presentation was difficulty in food, liquids or pills (24%). The clinical presentation are comparable with study by Massawe et al. where commonest symptoms were globus sensation (95.2%), hoarseness of voice (88.1)% and clearing of throat (83%) and least reported symptoms were chronic cough(31.9%), sore throat (23.4%), difficulty in swallowing (14.9%).[7] In the study conducted by Wang et al. they found that commonest symptom were heart burn, chest pain, indigestion or stomach acid coming up (79.2%), excess throat mucus or post nasal drip was second common (66.7%) and least common symptom was difficulty in swallowing food, liquids or pills (25%).[8]

In our study, on laryngeal endoscopic examination, posterior commisure hypertrophy was most commonly seen (88%). Second most common finding was erythema or hyperaemia (74%). Least common finding is granuloma or granulation (14%). In the study conducted by Kirti et al. they found that posterior commissure hypertrophy was most common followed by hyperaemia and least common finding is post nasal drip.[9] In the study conducted by Massawe et al. the most observed sign were thick endolaryngeal mucus, vocal cord edema and partial ventricular obliteration with 90.9%, 88.6% and 72.2% respectively and least observed sign is granuloma formation 11.4%.[7] In our study, known risk factors for laryngopharyngeal reflux were sleep less than two hours after meal (88%) and eating spice or fat foods (70%) which is consistent with study conducted by Massawe et al.[7] In our study, 74% patients were completely relieved, 18% patients were partially relieved and 8% patients had no response. In study conducted by Salihefendic et al. it was seen that 82% showed signs of improvement as a response to basic treatment provided by their physicians.[10] In the study conducted by Gupta et al. the patients treated with the laryngopharyngeal reflux protocol had higher rates of complete response ($p<0.001$).[11] Patients treated using the laryngopharyngeal reflux protocol were more likely to be successfully weaned off proton pumpinhibitor therapy ($p=0.006$).[11]

V. CONCLUSION:

Laryngopharyngeal Reflux Disease is highly prevalent among patients attending OPD services at Burdwan Medical College & Hospital, West Bengal. Commonest presentation is something sticking in throat and commonest finding is posterior commissure hypertrophy. Main modality of treatment of laryngopharyngeal reflux disease is behavourial modification and three months trial of gastric suppression. Most patients are completely relieved by this.

VI. TABLE & FIGURES:

Table 1: Distribution of cases according to age group

Age groups	No. of cases
11 – 20 years	3
21 – 30 years	13
31 – 40 years	27
41 – 50 years	24
51 – 60 years	18
61 – 70 years	15

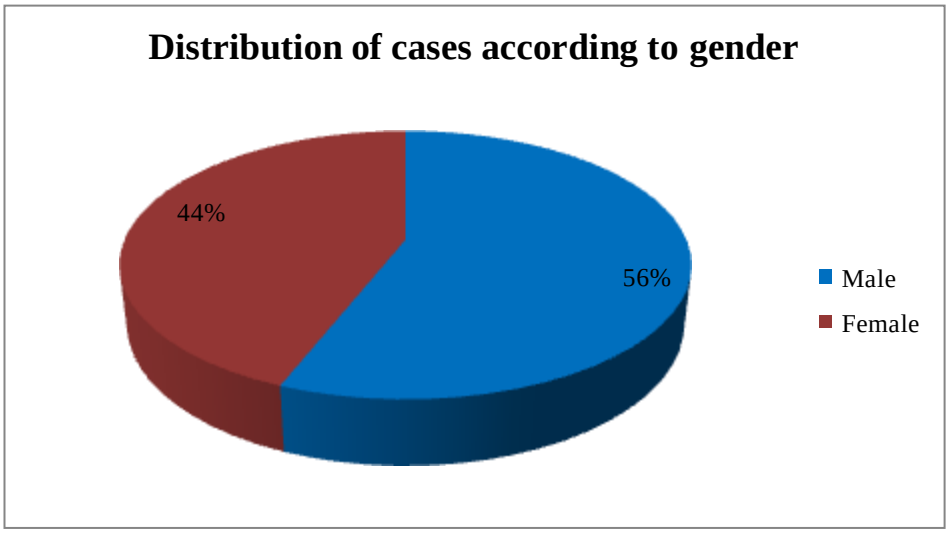

Figure No. 1: Distribution of cases according to gender

Table 2: Distribution of clinical features at presentation

Problems	Percentage
Hoarseness or problem with voice	43%
Clearing throat	66%
Excess throat mucus or post nasal drip	55%
Difficulty swallowing food, liquid or pills	24%
Coughing after eating or after lying down	50%
Breathing difficulties or chocking episodes	33%
Troublesome or annoying cough	60%
Sensation of something sticking in throat or lump in throat	78%
Heart burn, chest pain, indigestion or stomach acid coming up	75%

Table 3: Findings on laryngeal endoscopic examination

Problems	Percentage
Posterior commissure hypertrophy	88%
Erythema / hyperaemia	74%
Thick endolaryngeal mucus	70%
Diffused laryngeal edema	67%
Subglottic edema	37%
Ventricular obliteration	33%
Granulation / granuloma	14%

Table 4: Risk factors of Laryngopharyngeal Reflux Diseases

Risk factors	Percentage
Drinking alcohol	62%
Tobacco use	57%
Spicy, fatty food	70%
Caffeine drink	66%
Overly stressed	46%
Sleep less than two hours	88%
Obesity	28%

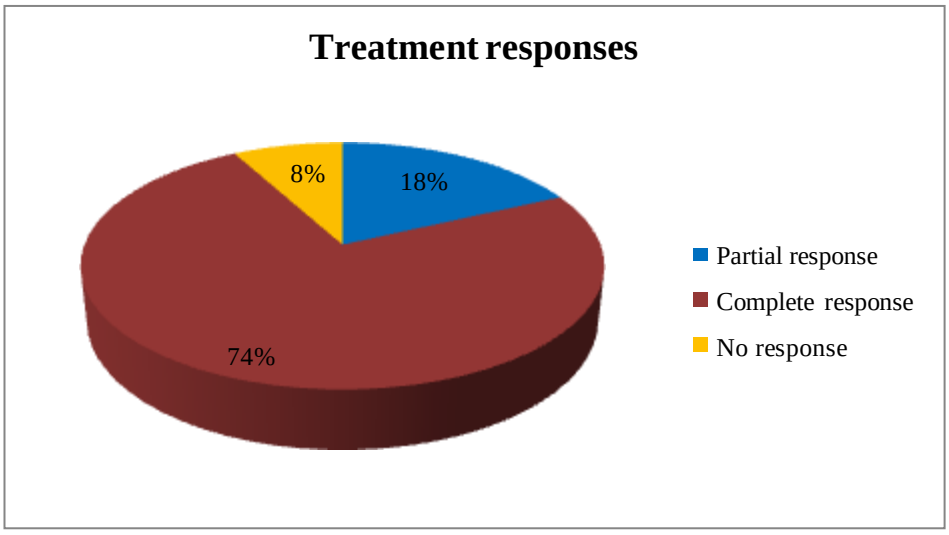

Figure No. 2: Treatment responses

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