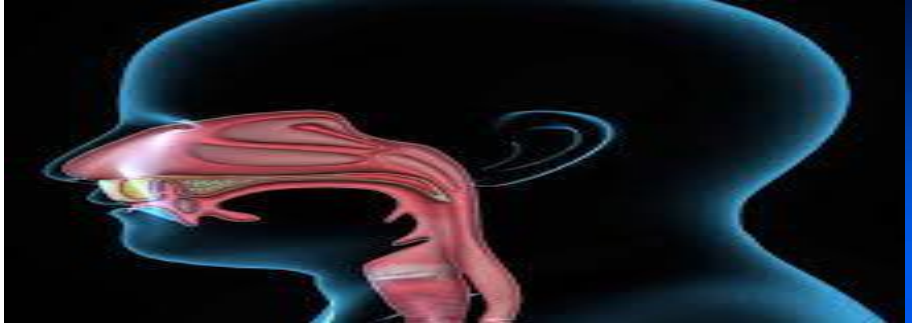
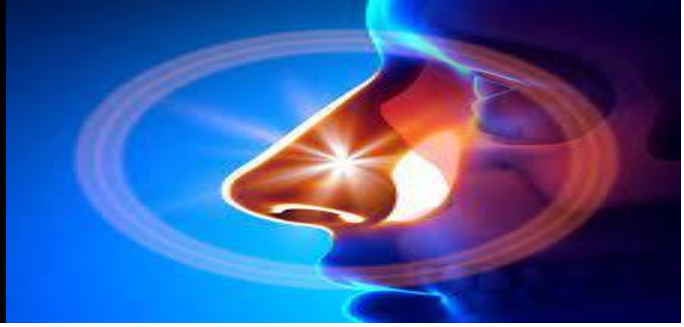




# ENT NEWSBUZZ

Vol 2 | Issue 8 | 2023


**Dear Doctor,**

**Greetings from Micro Labs limited. We are happy to bring you "ENT NEWSBUZZ" which contains latest and interesting news.**

**Inside This Issue:**

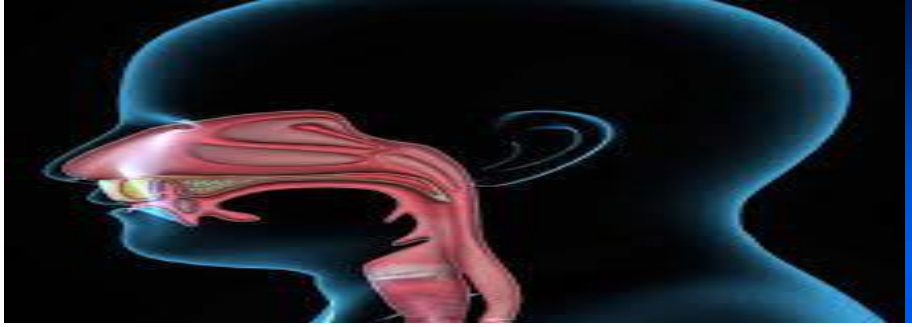
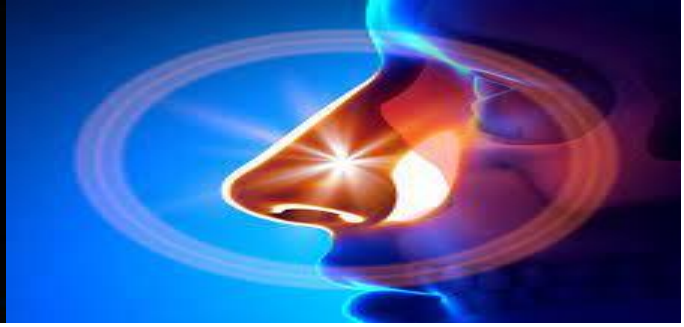


**Should you require any specific article or medical information, please feel free to contact us at medicalservices@microlabs.in**

**Looking forward to your valuable feedback**

**Best Regards,**

**Medical Team, Micro Labs Ltd**

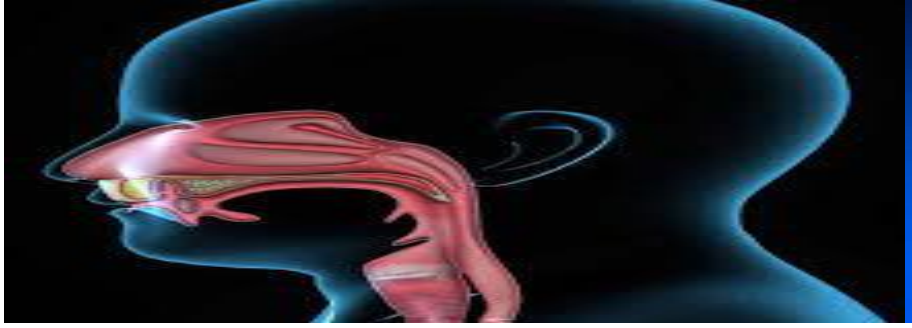
ENT NEWSBUZZ Vol 2| Issue 8|2023

# Evaluating the anatomical abnormalities and the development of both localised and diffuse chronic rhinosinusitis

**Introduction:** Chronic sinusitis (CRS) is defined as a chronic inflammatory illness of the paranasal sinuses that lasts for more than 12 weeks and contains at least one of the two symptoms of nasal obstruction and purulent nose, as well as at least one extra symptom, such as a headache or a diminished or lost sense of smell. CRS affects more than 10% of the adult population in the USA and Europe.[1] Based on nasal endoscopic results, CRS may be divided into two separate conditions: CRSsNP (disease without nasal polyps) and CRSwNP (disease with nasal polyps). Both CRSsNP and CRSwNP have unique symptoms, CT findings, therapies, chances of recurrence, and concomitant asthma. From poor sinus ventilation and drainage to a mucosal concept that emphasises the immunology of the sinus mucosa and its deviation, the pathophysiology of CRS has changed throughout time. [2] This study aimed to assess the effects of anatomical variation in localised and diffuse chronic rhinosinusitis (LCRS and DCRS).

**Method:** In this randomised study, a total of 281 patients were randomly divided into three groups: patients with LCRS, patients with DCRS, and a normal control group. The primary outcome of the study was to calculate and compare symptom visual analogue scale (VAS) scores, Lund-Mackay (L-M) scores, demographic data, illness type (with or without polyps), and frequency of anatomical variation.

**Results:** In this study, patients were split into three groups: 117 patients in the DCRS group, 43 patients in the LCRS group, and 117 patients in the control group. The frequency of anatomical variations was higher in LCRS than DCRS ($P<0.05$). In comparison to the DCRS group, the LCRS group had lower VAS ratings for total symptoms (3.48±2.04) ($P<0.05$). (Table 1) The frequency of variation was greater in the localized chronic sinusitis with polyps group (LCRSwNP) than the diffuse chronic sinusitis with polyps group (DCRSwNP) ($P<0.05$), as well as higher in the localised chronic sinusitis without polyps group (LCRSsNP) than the diffuse chronic sinusitis with polyps group (DCRSsNP). When compared to the LCRS group, the DCRS group had a considerably larger involvement of the ethmoid sinus (94%), sphenoid sinus (53.8%), and frontal sinus (64.9%). The L-M scores for patients with DCRS and nasal






polyps were considerably higher (3.78±2.07)) than for patients with LCRS with nasal polyps (2.63±1.12) than for those with DCRS without nasal polyps (14.96±6.15).

**Discussion:** According to this study, CRS patients are more likely to have structural abnormalities related to the constriction of the maxillary sinus ostium and nearby structures than the control group. Similarly compared to the Wu J. et al. study, patients with Para sinusitis had fewer anatomical variants and were associated with greater disease severity as compared to patients with higher numbers of anatomical variants.[3]

| | Obstruction | Discharge | Reduction of smell | Headache | Overall |
|---|---|---|---|---|---|
| LCRS | 4.67 | 3.74 | 2.86 | 1.88 | 3.48 |
| DCRS | 5.56 | 3.5 | 5.26 | 2.64 | 4.17 |
| Z | -1.600 | -0.329 | -3.482 | -1.002 | -1.979 |
| *P* | 0.110 | 0.742 | 0.000 | 0.316 | 0.048 |

VAS = visual analogue scale, LCRS = localized chronic rhinosinusitis, DCRS = diffuse chronic rhinosinusitis

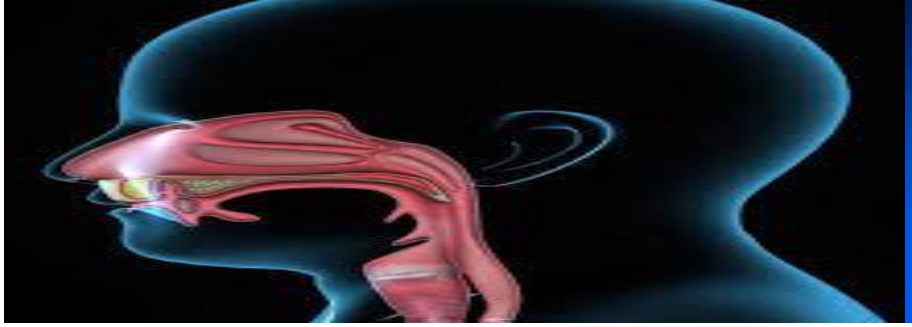
Table 1: VAS scores of localized and diffuse chronic sinusitis

**Conclusion:** This study concluded that anatomical variations are more common in LCRS than DCRS and may be linked to LCRS aetiology. The prevalence of polyps is not correlated with the frequency of anatomical variation.

**Anatomical variations are more common in localised chronic rhinosinusitis (LCRS) than diffuse chronic rhinosinusitis (DCRS), and they may be connected to the pathophysiology of localised chronic rhinosinusitis.**

**References:**

1. Liu L, et al. Roles of Anatomical Abnormalities in Localized and Diffuse Chronic Rhinosinusitis. Indian Journal of Otolaryngology and Head & Neck Surgery. 2023 Feb 10.
2. Bachert C, et al. Adult chronic rhinosinusitis. Nature Reviews Disease Primers. 2020 Oct 29.
3. Wu J, et al. Effect of paranasal anatomical variants on outcomes in patients with limited and diffuse chronic rhinosinusitis. Auris Nasus Larynx. 2017 Aug.



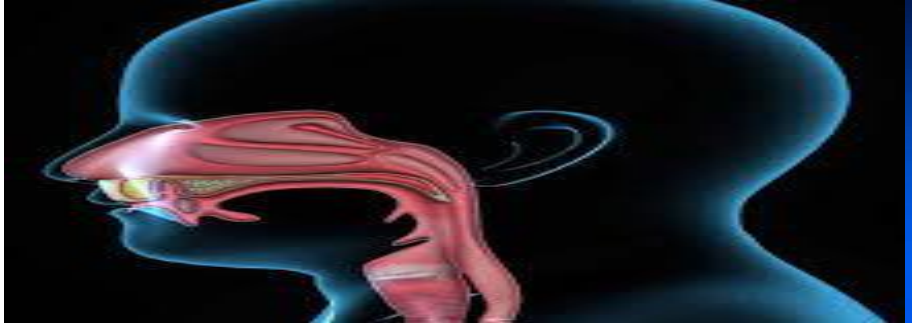

ENT NEWSBUZZ Vol 2 | Issue 8 | 2023

# Assessment of clinical symptoms of chronic rhinosinusitis with nasal polyps

**Introduction:** Chronic rhinosinusitis is an inflammatory condition of the paranasal sinuses and nasal passages that lasts for less than 12 weeks. The prevalence of chronic rhinosinusitis is estimated to range from 5% to 15%, and it is among the most frequent causes of ambulatory care visits. Chronic rhinosinusitis may be linked to an infection or blockage of the sinus outflow. Nasal polyps are commonly seen together with chronic rhinosinusitis, which has a complicated aetiology (CRSwNP).[1] Chronic rhinosinusitis with nasal polyps is most frequently an idiopathic condition, although it can also be caused by genetic, metabolic, or immune disorders. Eosinophilia and high levels of interleukin-4, interleukin-5, and interleukin-13 are present in the majority of white people with chronic rhinosinusitis and nasal polyps.[2] This study aimed to assess the clinical features of chronic rhinosinusitis in patients with nasal polyps (CRSwNP) and varying serum specific IgE (SIgE) and eosinophilic granulocyte infiltration status.

**Method:** In this retrospective study, a total of 192 patients with CRSwNP who underwent functional endoscopic sinus surgery were included. The disease's progression lasted from 4.6 to 18.2 months. The primary objective of this study was to evaluate the endoscopic score, computerised tomography (CT) score, visual analogue scale (VAS) score, and sino-nasal outcome test (SNOT) -22 score in patients with combined eosinophilic chronic rhinosinusitis (ECRS), combined SIgE positive non-ECRS, combined SIgE negative ECRS, and combined SIgE negative non-ECRS.

**Results:** In this study, positive SIgE was identified in 54.7% of patients, and negative SIgE was identified in 46.3% of patients. Among them, 60.9% had non-ERCS and 39.1% had ERCS in a positive SIgE group. In the negative SIgE group, 62.1% had non-ERCS and 37.9% had ERCS. Age, sex, the endoscopic score, the CT score, the serum eosinophil count, and the ECRS were not significantly different between the two groups ($p > .05$), although the SIgE-positive group's VAS and SNOT-22 scores were considerably greater than those of the SIgE-negative group. Patients with SIgE-positive combination ECRS had substantially higher VAS scores, endoscopic scores, CT scores, and SNOT-22 scores than patients with SIgE-positive combined non-ECRS. The CT score of patients with SIgE-negative combined ECRS is also considerably






higher than that of patients with SIgE-positive combined non-ECRS and SIgE-negative combined non-ECRS. (Table 2)

| Characteristics, mean ± SD | SIgE-positive combined ECRS ($n = 41$) | SIgE-positive combined non-ECRS ($n = 64$) | SIgE-negative combined ECRS ($n = 33$) | SIgE-negative combined non-ECRS ($n = 54$) | $p$ |
|---|---|---|---|---|---|
| VAS score | 20.72 ± 2.24 | 13.09 ± 1.62[a] | 13.84 ± 1.34[a] | 12.67 ± 1.20[a] | <.001 |
| Endoscopic score | 8.09 ± 1.04 | 7.06 ± 0.98[a] | 7.69 ± 1.18[a] | 7.75 ± 1.07[a] | .014 |
| CT score | 13.18 ± 1.66 | 8.79 ± 0.88[a] | 11.08 ± 1.12[a,b] | 8.75 ± 0.94[a] | <.001 |
| SNOT-20 score | 27.62 ± 2.31 | 12.09 ± 1.83[a] | 14.84 ± 1.84[a] | 12.97 ± 1.50[a] | <.001 |

*Note*: SNOT-22 = the sino-nasal outcome Test-22.

Abbreviations: CT, computerized tomography; ECRS, eosinophilic chronic rhinosinusitis; *SD*, standard deviation; SIgE, serum specific IgE; VAS, visual analog scale.

[a] $p < .05$ versus SIgE-positive ECRS.

[b] $p < .05$ versus SIgE-positive non-ECRS and SIgE-negative non-ECRS.

TABLE 2: Using combinations of SIgE and ECRS, estimate VAS, endoscopic, and CT scores.

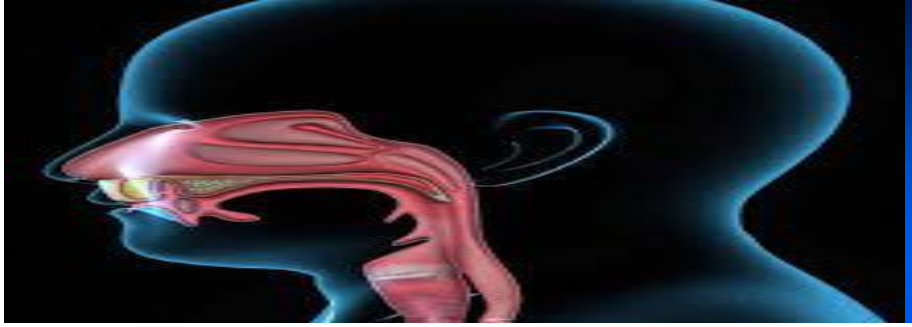
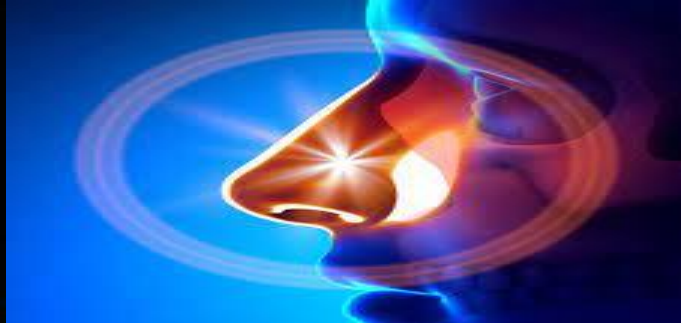
**Discussion:** This study revealed that endoscopic, VAS and CT scores were considerably higher in patients with SIgE-positive combination ECRS. Similarly, the Lund-Kennedy, VAS, and CT scores were significantly higher in the CRSwNP recurrence group compared to the non-recurrence group in the Meng Y., et al. study.[3]

**Conclusion:** This study concluded that the patients with SIgE-positive combination ECRS had higher VAS, endoscopic, and CT scores. It also provided a therapy reference for patients with CRSwNP.

**Higher VAS, endoscopic, and CT scores were seen in patients with SIgE-positive combination ECRS.**

**References:**

1. Hu J, Wang L, Ma R. Comparative study of clinical symptoms of chronic rhinosinusitis with nasal polyp's patients. Immunity, Inflammation and Disease. 2023 Feb.
2. Hopkins C. Chronic rhinosinusitis with nasal polyps. New England Journal of Medicine. 2019 Jul 4.
3. Meng Y, et al. Predictive value of computed tomography in the recurrence of chronic rhinosinusitis with nasal polyps. In International Forum of Allergy & Rhinology 2019 Nov.

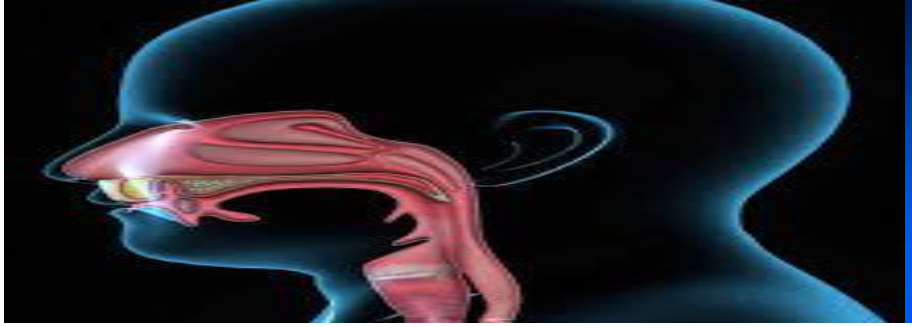
ENT NEWSBUZZ Vol 2| Issue 8|2023

# Evaluating the risk of recurrence for vocal folds with poor surface leukoplakia

**Introduction:** Vocal fold leukoplakia (VFL) is a white epithelial lesion that affects the vocal folds. Males have a larger incidence than females, with 10.2 and 2.1 lesions per 100,000, respectively, and the incidence peaks between the ages of 45 and 64. Depending on the chance of a malignant alteration, cold tools or lasers are used to remove vocal fold leukoplakia. It is difficult to predict VFL recurrence correctly, and postoperative recurrence still raises concerns.[1] The clinical significance of vocal fold leukoplakia is related to the potential for the development of aggressive cancer. The reported malignant transition rates of laryngeal dysplasia range from 11% to 25%; however, it is difficult to predict which individuals may develop cancer. Excisional therapy is not necessary for leukoplakia patients without dysplasia. In addition, due to the minimal risk of malignant transformation in the short term, urgent surgical therapies are not considered for individuals with moderate dysplastic vocal fold leukoplakia.[2] The aim of this study was to detect inferior surface vocal fold leukoplakia (VFL) lesions as a risk factor for recurrence.

**Methods:** In this retrospective study, a total of 37 vocal fold leukoplakia (VFL) patients were included. Patients were randomly divided into the recurrent groups and non-recurrent group. The primary outcome of the study was to evaluate the clinical features, including the following: sex, age, alcohol intake, smoking, presence of laryngopharyngeal reflux disease (LPRD), location and size of the lesion, lesions of the inferior surface and anterior commissure, difficult laryngeal exposure (DLE), pathological grade, and comparisons between the groups on each individual factor. Patients underwent laryngoscopy prior to surgery.

**Result:** Among the 37 patients, 30 were known smokers, and 27 had a history of alcohol use. Laryngopharyngeal reflux disease was found in 15 patients. 13 of the patients had bilateral lesions, and 15 of them had lesions that covered more than 50% of the vocal fold surface, and




ENT NEWSBUZZ Vol 2| Issue 8|2023

16 of the patients had lesions on their inferior surfaces. Four patients had anterior commissure lesions, and five had DLE. Mild dysplasia was the most frequent histological finding at the first biopsy. Twelve patients developed recurrent VFL, and three patients had residual VFL. At the time of the operation, the inferior surface of the vocal fold was affected in 8 patients in the recurrence group and 6 patients in the non-recurrence group. Patients with inferior surface lesions experienced a considerably greater rate of recurrence.

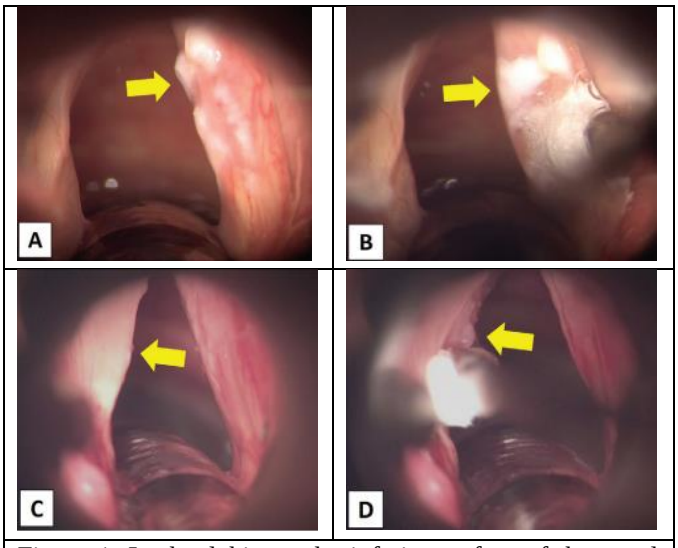


Figure 1: Leukoplakia on the inferior surface of the vocal folds The arrows point to the lesion. A and C: Before surgery, a microscopic image B: After pushing back the lateral vocal folds D: After pressing the vocal fold's edge.

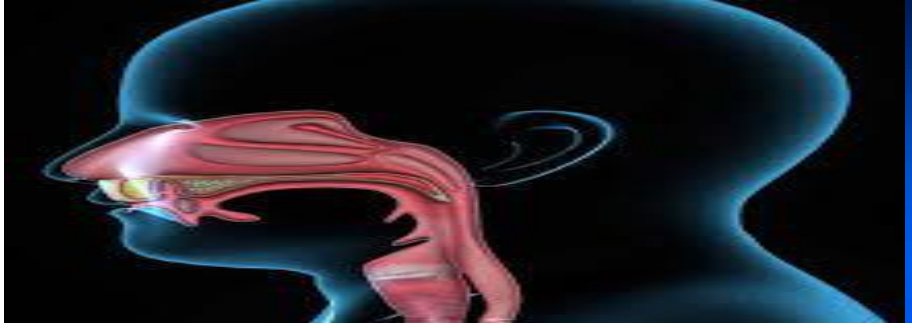
**Discussion:** This study reported that post-operative recurrence rates are high and vary widely. Moreover, repeated surgeries result in scarring and dysphonia in the vocal folds, a faster rate of malignant transformation, and a shorter period before squamous cell carcinoma develops. Similarly, in the Chen M. et al. study, the size of the lesion and the pathological grade were significant risk variables that predicted the recurrence of vocal fold leukoplakia.[3]

**Conclusions:** This study concludes that the lesions on the inferior surface of the vocal fold significantly increased the probability of recurrent VFL.

**The inferior surface of VFL lesions is a significant risk factor for recurrence**

**References:**

1. Hasegawa H, et al. Inferior surface leukoplakia of vocal folds: risk of recurrence: a preliminary study. Ear, Nose & Throat Journal. 2021 Feb 9.
2. Chen M, et al. A morphological classification for vocal fold leukoplakia. Brazilian Journal of Otorhinolaryngology. 2019 Nov 7.
3. Chen M, et al. Recurrence of vocal fold leukoplakia after carbon dioxide laser therapy. European Archives of Oto-Rhino-Laryngology. 2017 Sep.




ENT NEWSBUZZ Vol 2 | Issue 8 | 2023

# A rare case of bilateral simultaneous facial nerve palsy with tubercular otitis media

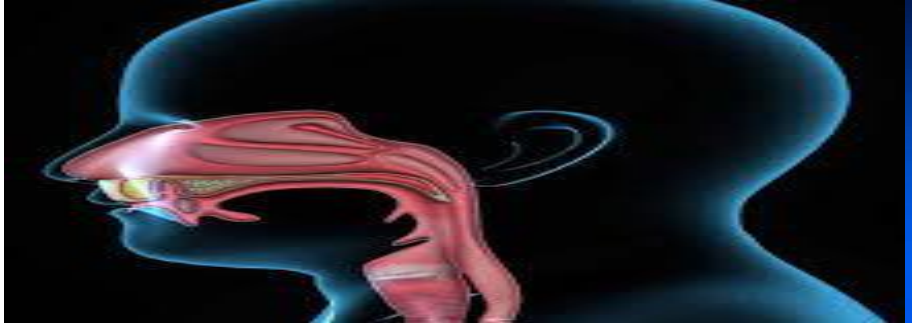
**Introduction:** A facial paralysis that strikes both sides of the face simultaneously within four weeks is referred to as bilateral simultaneous facial nerve paralysis. This extremely rare disease affects just 0.3–2% of people with facial nerve palsy. It affects 1 in every 5 million individuals each year. Bilateral simultaneous facial nerve palsy occurs when the opposite side's facial nerve experiences injury within 30 days of the first side.[1] An enlarging or repeated perforations of the tympanic membrane with pale granulations are common symptoms of tuberculous otitis media, as well as hearing impairment. More serious complications include labyrinthitis, mastoiditis, facial palsy, and sensorineural hearing loss.[2] This study presents the case of a 31-year-old male patient with simultaneous bilateral facial nerve palsy.

**Case presentation:**

A 31-year-old male patient presents with simultaneous bilateral facial nerve paralysis and severe ear discharge. A left ear perforation and bilateral right myringitis were discovered during the ear examination. The nose had hypertrophied inferior turbinates and a left nasal septum deviation. Systemic evaluations within normal ranges, no meningitis symptoms, and Regular blood tests revealed an increased neutrophil count and total WBC count.

To rule out viral aetiology, blood tests were performed, and an ear pus culture was sent. Imaging techniques such as computed tomography (CT) of the temporal bones and magnetic resonance imaging (MRI) of the brain were used to rule out intracranial and intratemporal causes of facial nerve involvement. A lumbar puncture was performed to rule out TB meningitis; the results were negative for the condition. Induced sputum and ear discharge were sent for AFB culture and TB PCR, which came back positive because the etiology of the condition was suspected to be tuberculous otitis media.

A chest CT scan revealed the presence of pulmonary tuberculosis; anti-tubercular treatment was started and followed by the patient. Physiotherapy was started to treat facial paralysis and its improved after physiotherapy. The ears stopped draining, and they started to dry out. In 4






months, facial paralysis returned to normal, and no signs of persistent facial paralysis were seen upon re-evaluation.

The patient is continuing TB therapy and tested negative. The patient has bilateral tympanic membrane perforations and no discharge on re-evaluation. (Figure 2)

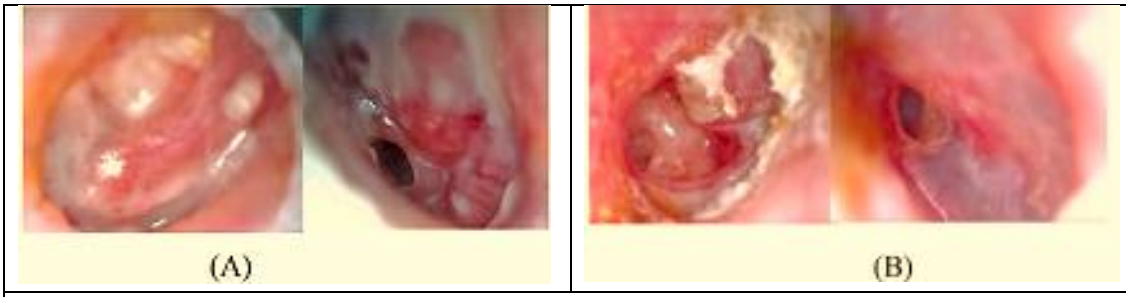



Figure 2: A. Otoscopy results showed myringitis in the right ear and a perforation with fluid flow in the left ear. B. Otoscopy results showed bilateral dry ears with central perforation after 5 months.

**Discussion:** A small percentage of peripheral facial palsies between 0.3% and 2% are bilateral in nature. Up to 35% of bilateral peripheral facial palsies are caused by Epstein-Barr virus (EBV) infection and range from 0.5% to 7.5%.[3]

**Conclusion:** Bilateral facial nerve paralysis is a very rare case that requires immediate treatment and examination. Early identification and treatment of tubercular otitis media can avoid further complications and potentially reverse paralysis in cases where there is ear drainage and early facial nerve involvement.

**Early identification and treatment of tubercular otitis media helps to avoid further complications and reverse paralysis.**

**Reference:**

1. Chundathodi A, et al. Bilateral simultaneous facial nerve palsy: A rare presentation of tubercular otitis media. Otolaryngology Case Reports. 2023 Jun 1.
2. Van Thi Khanh Nguyen CH, et al. An Atypical Case of Tuberculous Otitis Media: The Importance of Early Definite Diagnostic Surgery. NVEO-NATURAL VOLATILES & ESSENTIAL OILS Journal| NVEO. 2021 Dec 11.
3. Cabrera Muras A, et al. Bilateral facial nerve palsy associated with COVID-19 and Epstein-Barr virus co-infection. Eur J Neurol. 2021 Jan.