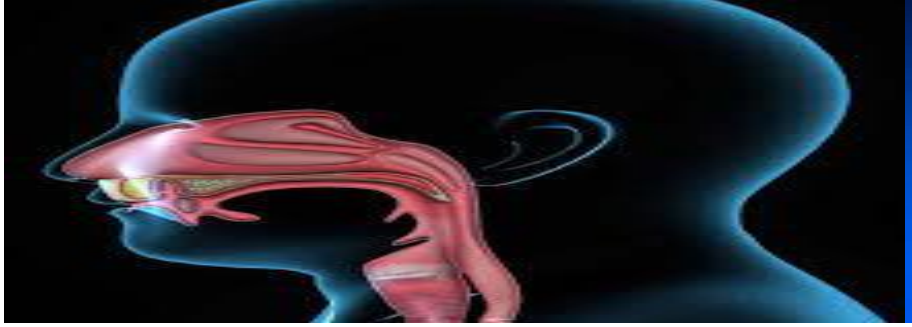
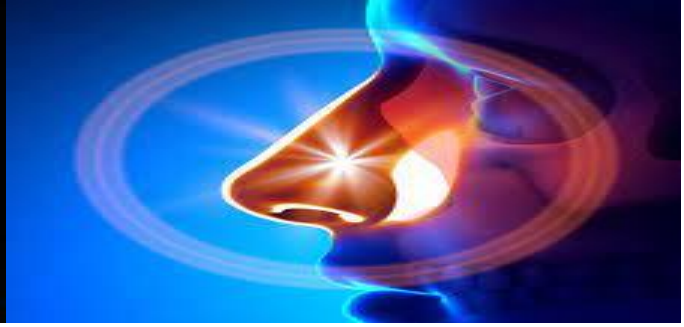



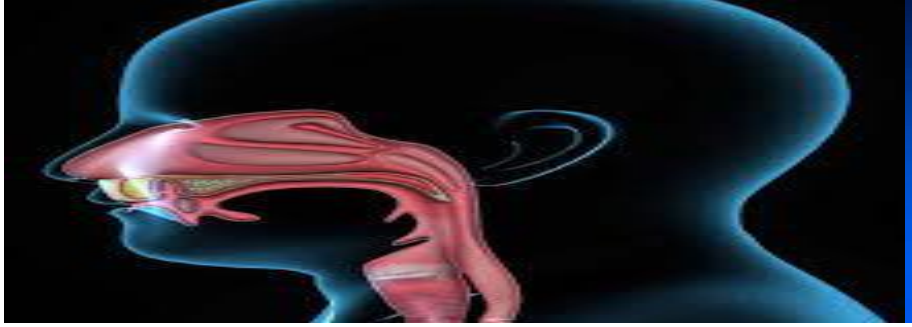
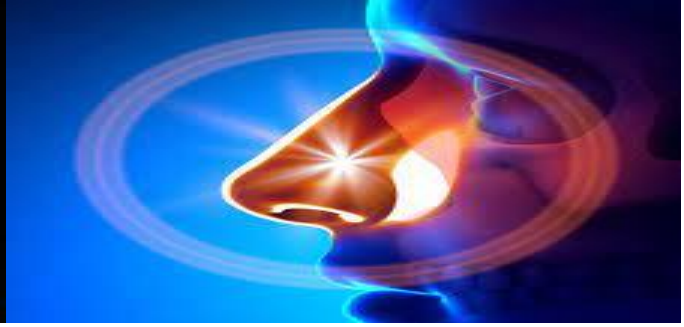
ENT NEWSBUZZ

Vol 1 | Issue 5 | 2022

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

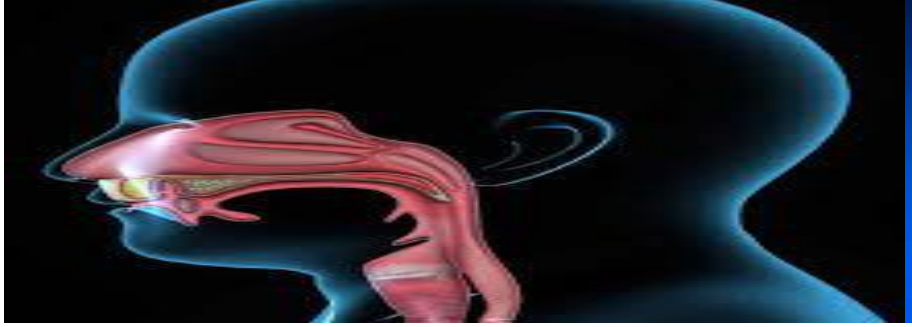
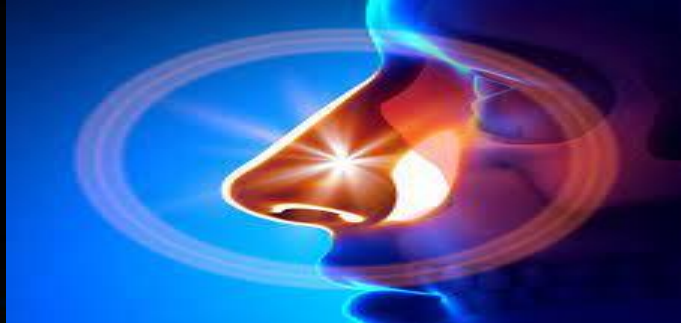
ENT NEWSBUZZ Vol 1 | Issue 5 | 2022

Finding the survival rate of immediate posterior implants using an immediate chair-side technique for custom healing abutments

Advancement in implant planning, robotic surgery, are showing more predictable and expedited approaches to dental implant rehabilitation. New technology can reduce implant impression using scanning software and virtual restorative design. The advancement in technological concept within the preoperative phase with CT and digitally guided implant placement along with new implant restorative design are extraordinary. This advancement improves in achieving predictable replication of the natural anatomic features of the rehabilitated anterior maxillary dentition. Modern approaches are more accurate and precise as they enable the clinician to capture and analyse the anatomic emergence profile.[1]

Several studies have described about the pre-treatment planning software based on radiologic images. This concept helps to visualize the jawbone anatomy and the integration of implant placement and prosthetic re-constructions. Stereolithographic drilling template is used in the shifting of the ideal implant position from the computer planning to the surgical field. Treatment planning and the combination of CAD–CAM technology together shows a possibility to pre-manufacture individual prosthetic solutions that can quickly connect to the implants after surgical placement.[2] Some factors such as Implant length, diameter, surface characteristics, oral hygiene, and proper maintenance and control of the peri-implant soft tissue and crestal bone interface are implicated in implant failure. [1]

To conduct this study, Akin R etal designed and implemented a retrospective analysis of the data. Almost 115 patients who presented over a 34-month period, for molar implant placement into fresh extraction sites were enrolled. Patients were then followed up for 8 years. All implants were placed with a flapless protocol using a 6mm tapered two-piece titanium root and were covered with a customized immediate chair-side healing abutment fabricated with a temporary titanium temporary abutment and photopolymerized composite restorative material.

The primary endpoint of this study was to completely restore a functional root form dental implant placed immediately into a molar extraction socket with a custom healing abutment without pain, infection, with clinically acceptable radiographic bone remodelling. Overall survival rate of 98.26%, with 100% survival in the 31 second molar sites and 97% and 98% in maxillary and mandibular first molar sites were observed. Kaplan-Meier analysis revealed the implant survival curve, along with 95% confidence intervals. Two failures were observed on days 6 and 106 following implant placement. Average time of follow up for patients without failure was 4.43 years while 18.2% of patients had at least 8 years of failure free follow-up time.

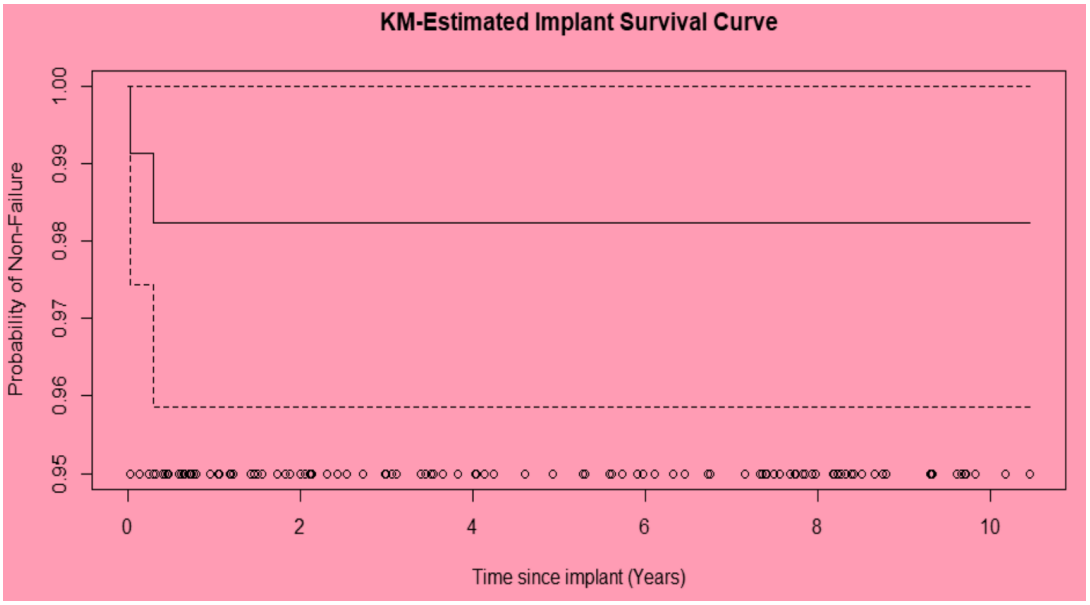
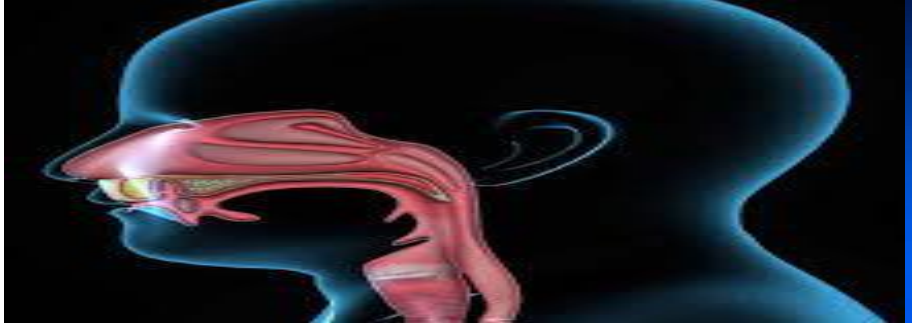
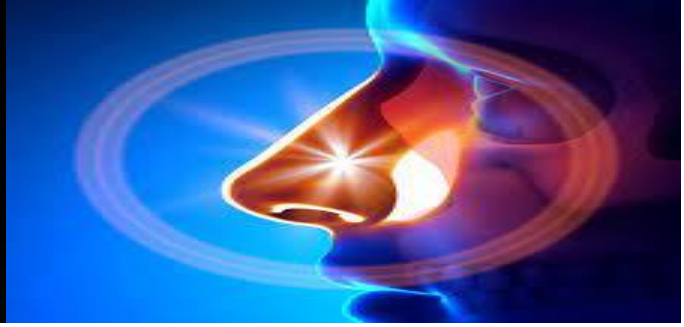


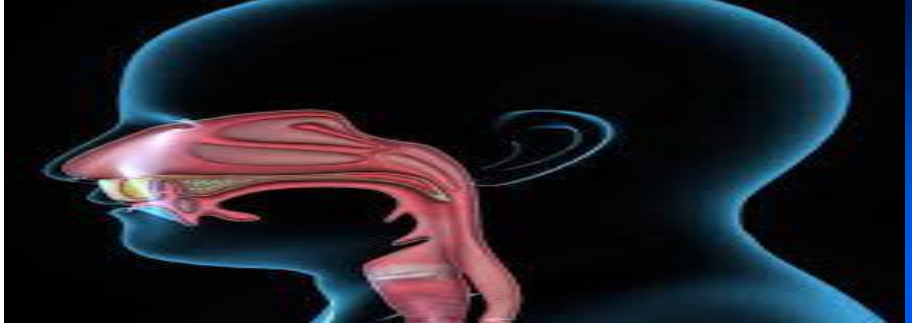
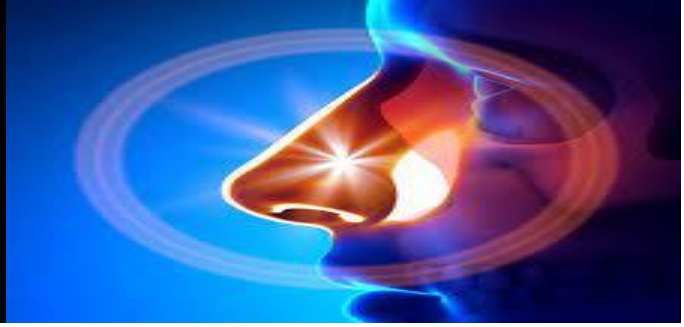
Figure 1:Kaplan-Meier estimated Implant Survival Curve + 95% confidence interval

Conclusion: This study concluded that the uses of Anatomic Harmony Abutment technique provides highly successful implant outcomes.

References

1. Van Assche N, van Steenberghe D, Quirynen M, Jacobs R. Accuracy assessment of computer-assisted flapless implant placement in partial edentulism. J Clin Periodontol. 2010 Apr;37(4):398-403.
2. Akin R, Chapple AG. Clinical Advantages of Immediate Posterior Implants with Custom Healing Abutments: Up to 8 Year Follow Up of 115 Cases. Journal of Oral and Maxillofacial Surgery. 2022 Aug 30.

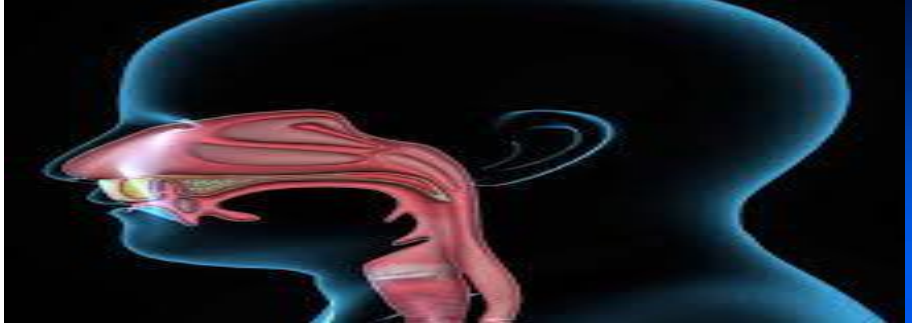
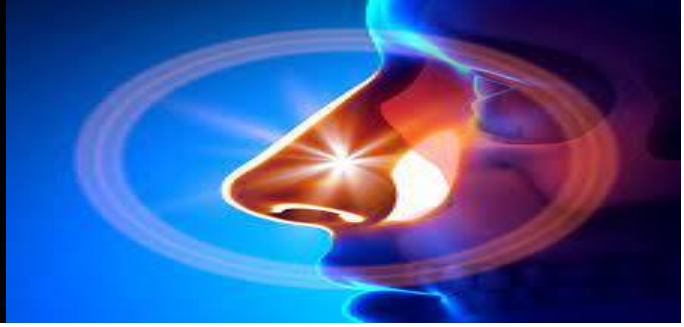
ENT NEWSBUZZ Vol 1 | Issue 5 | 2022

Location and course of the Greater Palatine Canal and its relationship with Anatomical Landmarks

Endoscopic surgery plays a major role in treating tumors and other pathologies around the pterygopalatine fossa or the lateral recess of the sphenoid sinus. Compared to traditional craniofacial procedures, improved visualization by endoscopic access helps the surgeon to locate and preserve the contents of the pterygopalatine fossa. To minimize the injury in the maxillary artery, the maxillary nerve, and the branch of the greater palatine nerve, surgery of this area should be performed cautiously. Pterygopalatine fossa can be seen with the shape of an inverted cone, with the greater palatine canal (GPC) resulting to the greater palatine foramen. Greater palatine canal neurovascular bundle appears from the canal in the posterolateral region of the hard palate, in the perpendicular plate of the palatine bone. While the descending palatine artery emerges from the third segment of the maxillary artery within the pterygopalatine fossa till greater palatine artery and lesser palatine artery. Greater palatine artery and lesser palatine artery along with the greater palatine nerves and the lesser palatine nerves course within the greater palatine canal leading to the maxillary nerve

Machado A aimed to study the location and course of the greater palatine canal by analyzing its relationship with anatomical landmarks that can be used during endoscopic sinus surgery. This retrospective study enrolled 100 random patients and paranasal sinus CT scans was evaluated. From cranial to caudal, 5 measurements related to the course of the greater palatine canal were conducted

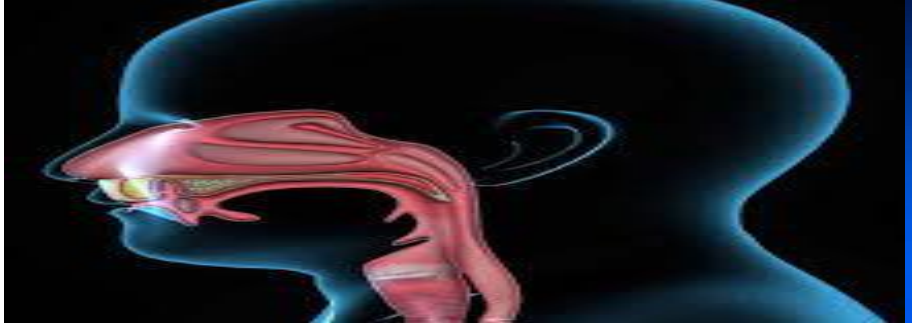
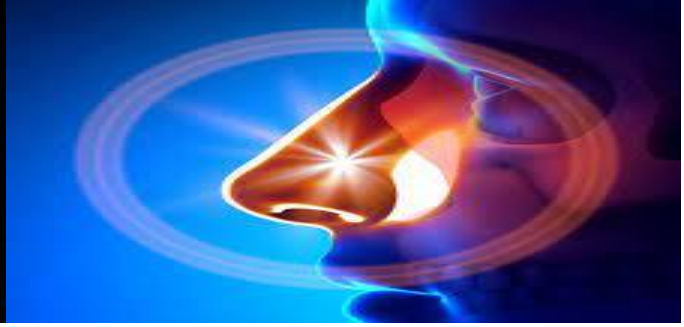
- Coronal plane (Fig 2): This denotes the distance from the inferior bony border of the sphenopalatine foramen to the cranial entrance of the greater palatine canal
- Axial plane (Fig 3): This denotes the distance from the most dorsal and inferior bony insertion of the middle turbinate bone to the anterior margin of the greater palatine canal

- Axial plane (Fig 4): This denotes the distance from the most dorsal and inferior bony insertion of the inferior turbinate bone to the anterior margin of the greater palatine canal
- Sagittal plane (fig 5): This denotes the angle between the horizontal palatine bone and the greater palatine canal
- Sagittal plane (fig 6):This denotes the length of the greater palatine canal from its entry point in the pterygopalatine fossa

Assessment of the angle between the horizontal palatine bone and the greater palatine canal, length, and the prevalence of osteophytes in greater palatine canal was done. Result of this study highlighted that 9.39 ± 1.72 mm was the calculated mean distance of the inferior border of the sphenopalatine foramen to the cranial entrance of the greater palatine canal while 3.89 ± 0.93 mm was mean distance of the dorsal insertion of the middle turbinate to the anterior margin of the greater palatine canal. On the other hand, the distance of the dorsal insertion of the inferior turbinate to the anterior margin of the greater palatine canal was 3.16 ± 0.81 mm and the mean angle between the horizontal palatine bone and the greater palatine canal was 114.33 ± 10.92o. The mean length of the greater palatine canal was 30.23 ± 3.74 mm. No significant difference between the two sides were observed

CONCLUSION: The landmarks mentioned in this study provide support to the endoscopic surgeon while operating the pterygopalatine fossa and the surrounding bony structures containing the greater palatine canal. Preoperative CT can assess these landmarks and can be of help during surgery in the area of the pterygopalatine fossa. These presented landmarks in this study are easy to assess and contribute to safer dissection of the pterygopalatine fossa.

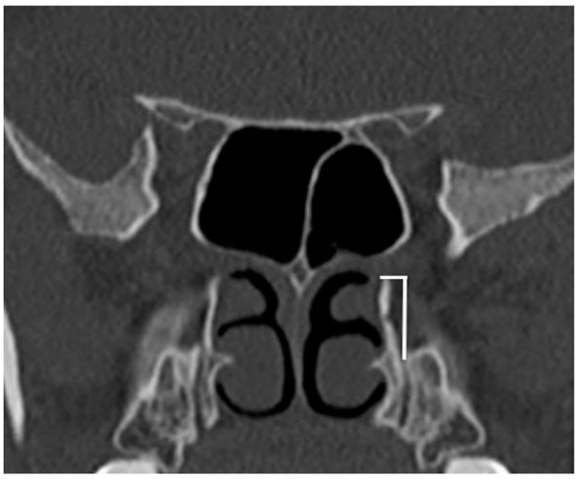


Figure 2:Coronal plane:

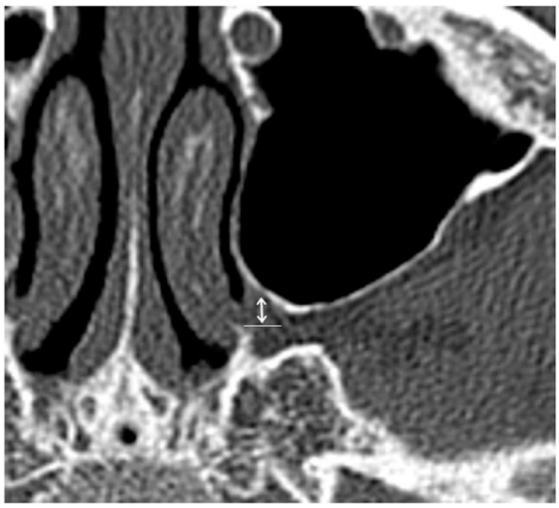


Figure 3: Axial plane:

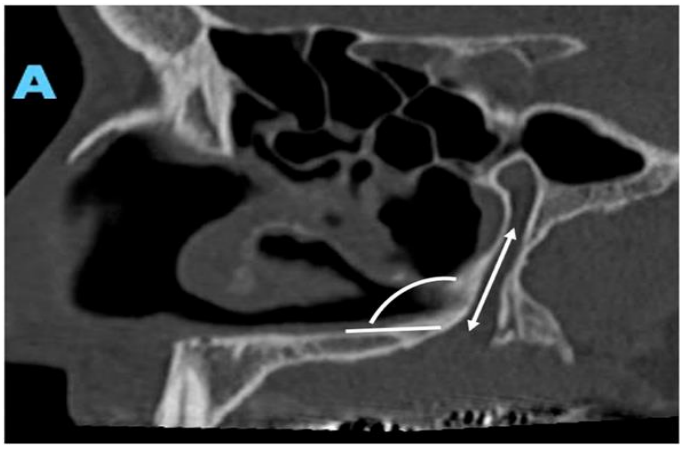


Figure 5: Sagittal plane

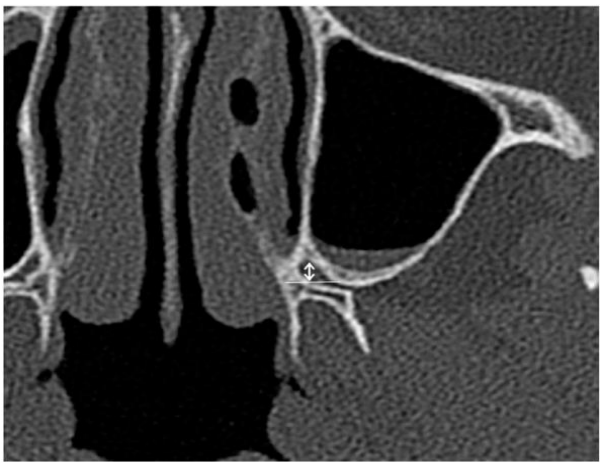
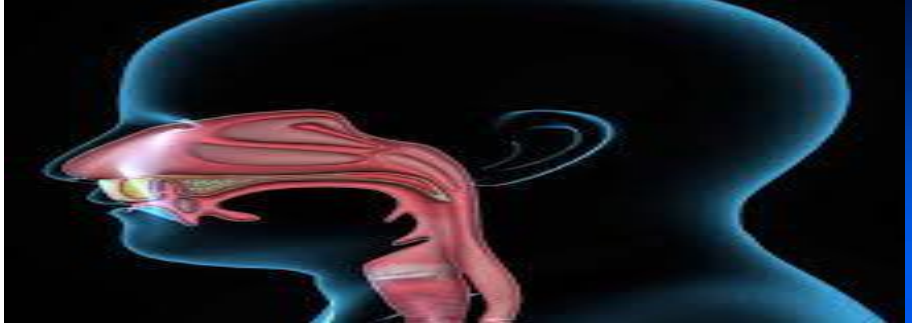
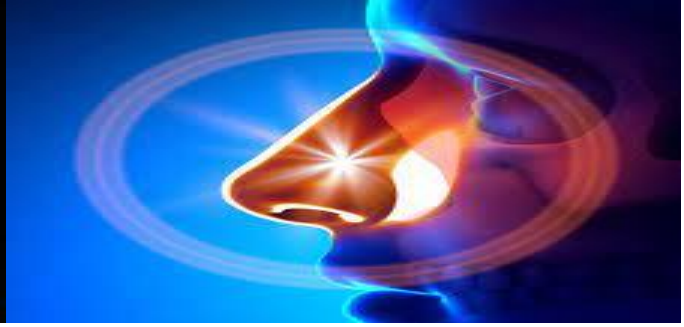


Figure 4: Axial Plane

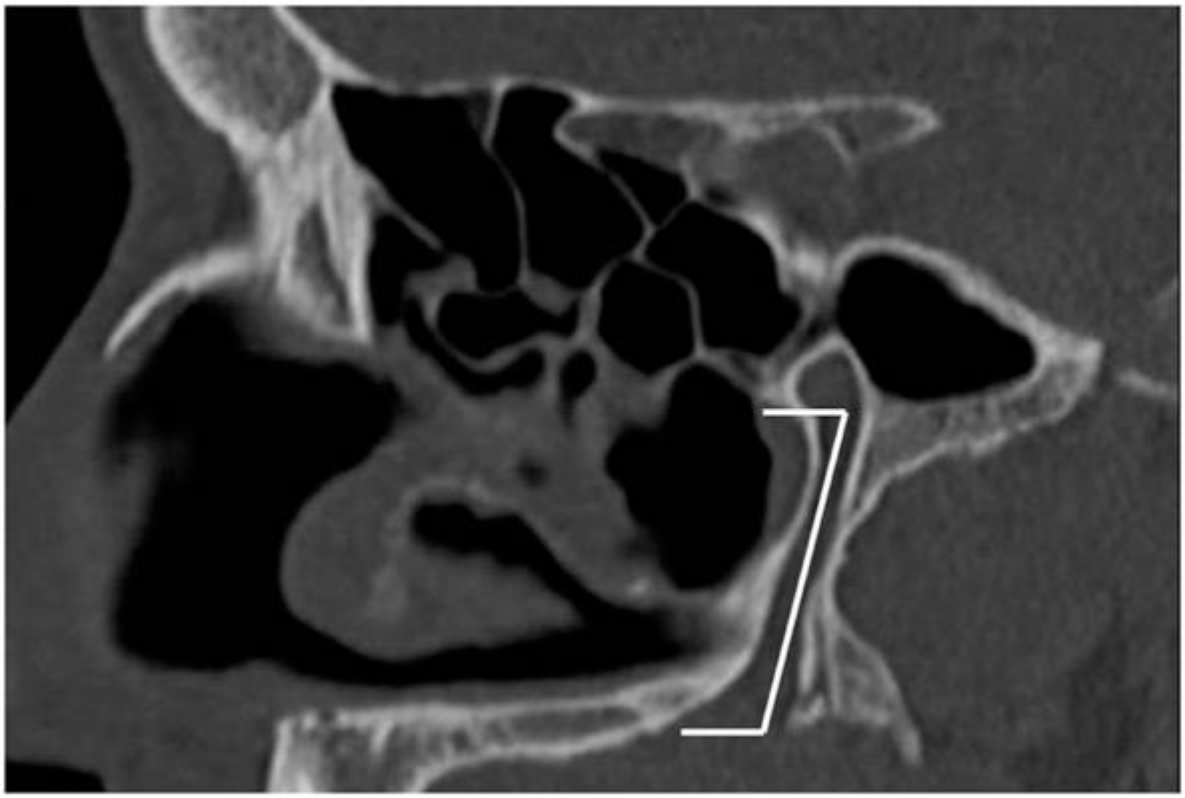
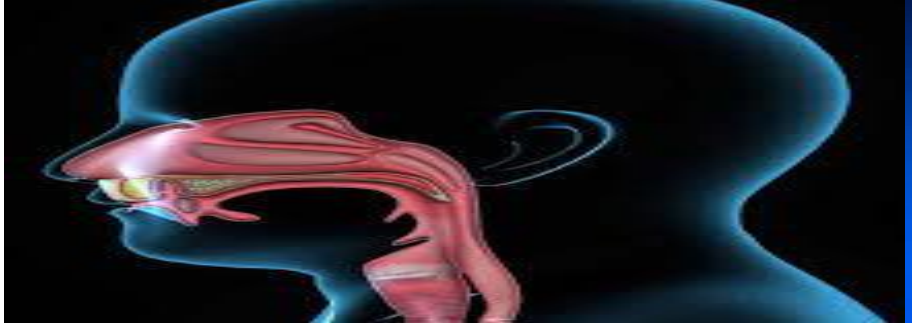
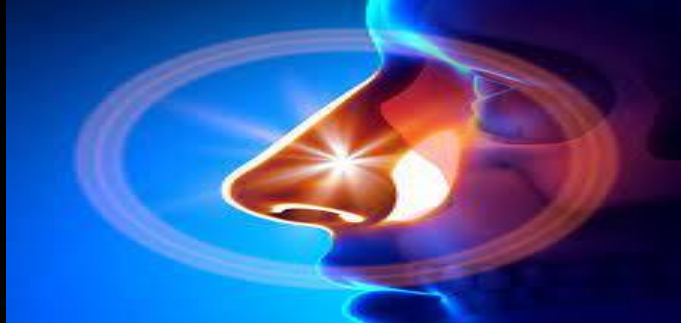


Figure 6: Sagittal plane

Reference:

Machado A, Simmen D, Schuknecht B, Briner HR. Greater Palatine Canal: Computed Tomography-Based Anatomic Analysis And Clinical Significance for the Sinus and Skull Base Surgeon. Ear Nose Throat J. 2022 Sep 8:1455613221111063

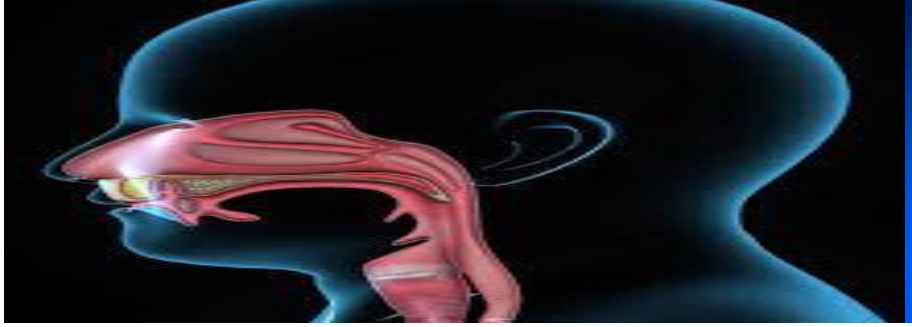
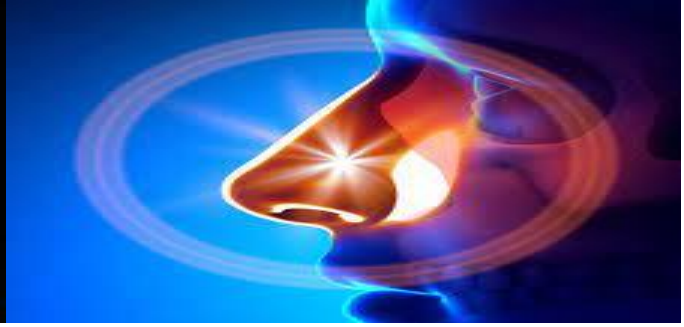



ENT NEWSBUZZ Vol 1 | Issue 5 | 2022

Relationship between Chronic rhinosinusitis and Laryngopharyngeal reflux based on nasal pepsin examination

Chronic rhinosinusitis (CRS) is a chronic disease that involves long-term inflammation of the nasal and paranasal sinus mucosa. Symptom can last for 12 weeks or more than that [1]. Chronic rhinosinusitis may lower the quality of life of a patient. Symptoms observed are at least two out of four cardinal symptoms such as facial pain/pressure, hyposmia/anosmia, nasal drainage, and nasal obstruction for at least 12 consecutive weeks.[2] A research conducted on Taiwanese population in 2015 showed a twofold relationship between increased risk of chronic rhinosinusitis and Laryngopharyngeal reflux. Laryngopharyngeal reflux is a condition characterized as the backflow of gastric fluid through the oesophagus into the laryngopharynx. A study conducted by Fokkens et al, 2012 highlighted that laryngopharyngeal reflux is a common suspect of the causes of Chronic rhinosinusitis onset. Another study by Flook and Kumar's study (2020) explained the insufficient evidence of the outcome of antireflux therapy in adult patients.[1]

Buana AW etal aimed to analyse the relationship between Chronic rhinosinusitis and Laryngopharyngeal reflux based on nasal pepsin examination. This cross-sectional prospective study enrolled 35 patients with complaints of runny nose and nasal congestion within 12 weeks. Enrolled patients were then subjected to nasal endoscopy and fibre optic laryngoscope and. With the help of nasal washing method, specimens from the samples were obtained. PepTest lateral flow device was used to evaluate pepsin. Of the total enrolled patients, 13 were men and 22 were women. 83.3% patients with chronic rhinosinusitis tested positive for pepsin. Based on the administration of RSI questionnaire, all patients experienced atleast four symptoms (clearing throat, excess throat mucous or postnasal drip, sensations of something sticking in the throat or a lump in the throat, Heartburn, chest pain, indigestion, or stomach acid coming

up). Symptoms like difficulty swallowing food, liquids, or pills are considered as the lowest symptom in the Chronic rhinosinusitis group.

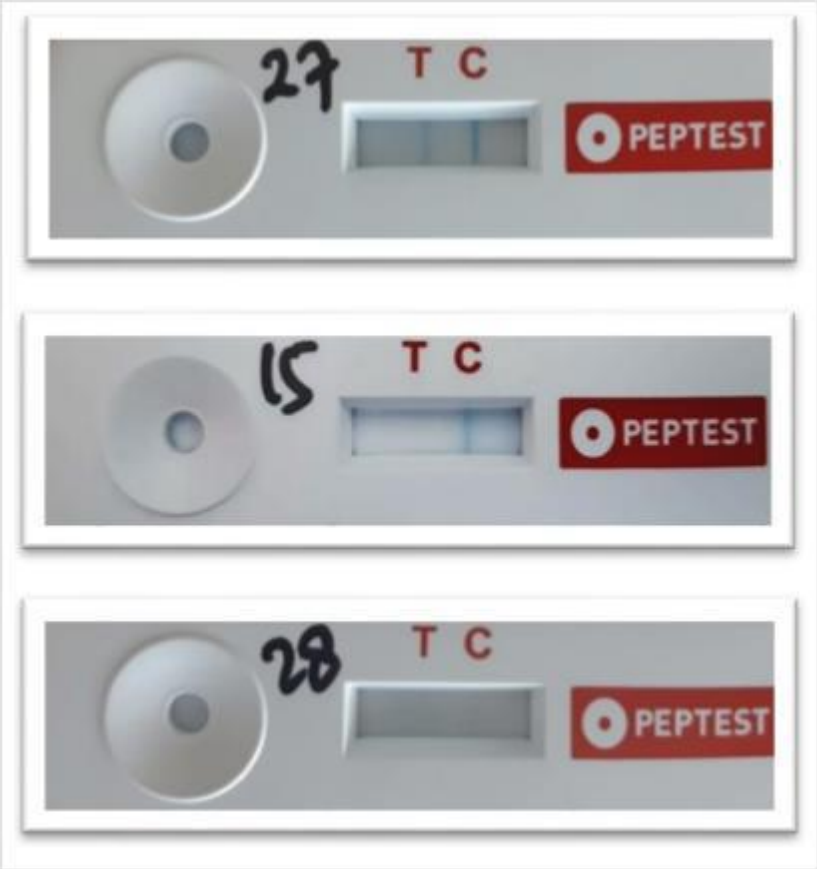
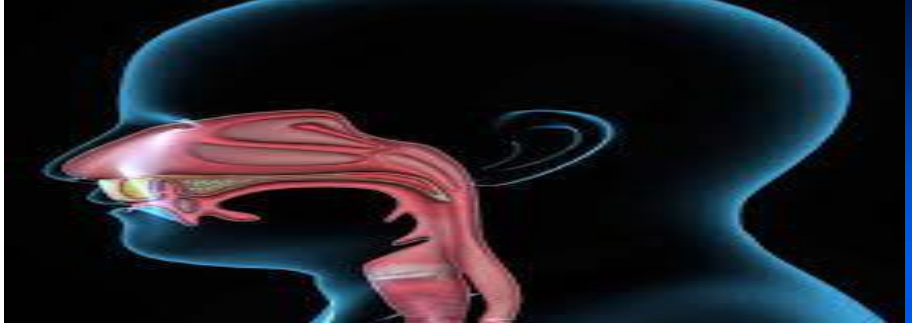
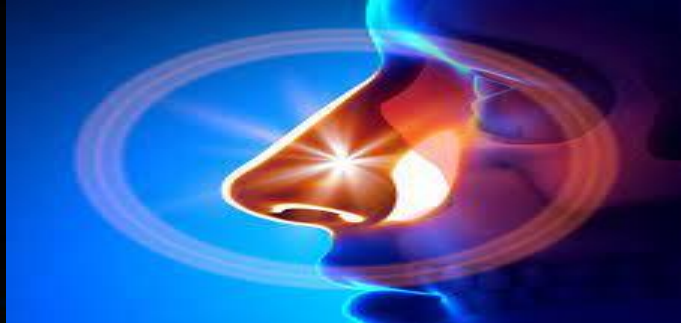


Figure 7: PepTest LFD results; a. positive (T & C) result; b. negative result (C only); c. needs to be repeated

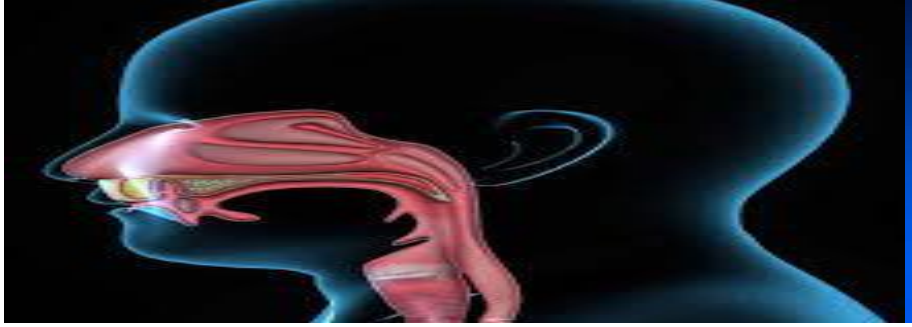
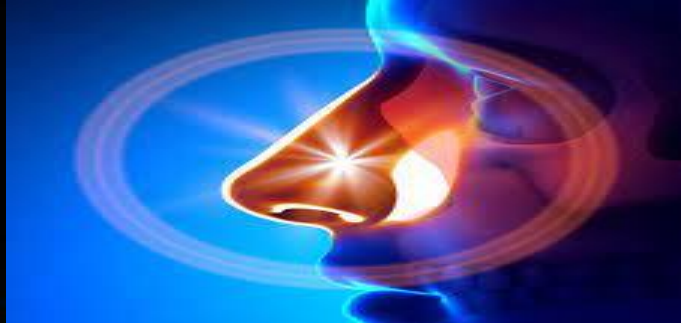



In non-Chronic rhinosinusitis group, symptoms like problem with the voice or hoarseness were the lowest complaint. The highest reflux finding score in Chronic rhinosinusitis groups were posterior commissure hypertrophy in 20 patients. Thick endolaryngeal mucusin was the observed 2nd highest complaint in 19 patients. No patients were found having granuloma/granulation tissue. In non- Chronic rhinosinusitis group, pepsinA finding was observed in 4 patients while in the Chronic rhinosinusitis group pepsin A was seen in 20 patients. A significant difference in the number of positive Peptests was observed between patients with Chronic rhinosinusitis group and non- Chronic rhinosinusitis group (Fig 7). According to Fisher's Exact Test, a correlation between positive pepsinA findings in patients with Chronic rhinosinusitis group was obtained

CONCLUSION: Based on the nasal pepsin examination, a correlation between Chronic rhinosinusitis and Laryngopharyngeal reflux was obtained. However, the presence of pepsinA in the nasal cavity reflected that Laryngopharyngeal reflux could be a factor causing Chronic rhinosinusitis.

Reference

1. Buana AW, Kristyono I, Juniati SH. Nasal pepsin A: Biomarker of laryngopharyngeal reflux in chronic rhinosinusitis.
2. Sedaghat AR. Chronic rhinosinusitis. American family physician. 2017 Oct 15;96(8):500-6.

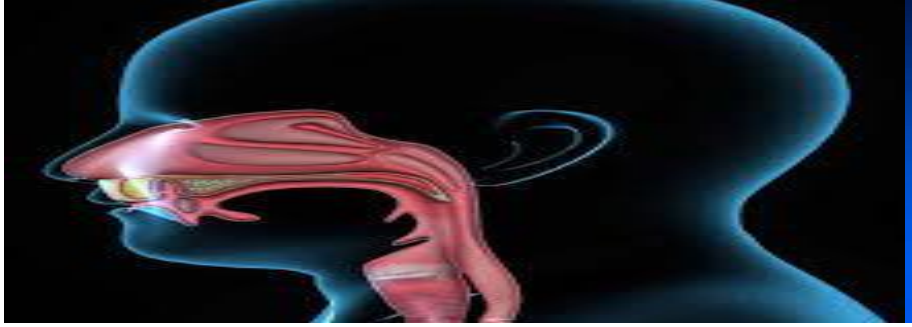
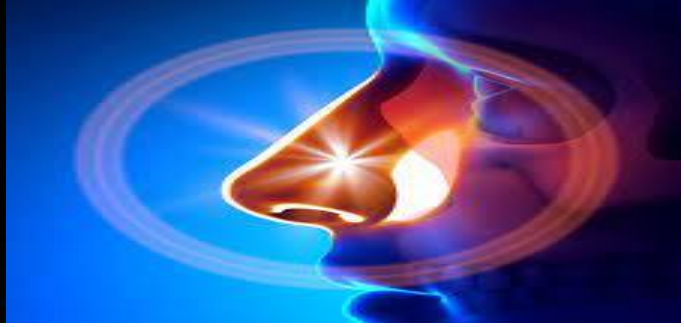



ENT NEWSBUZZ Vol 1 | Issue 5 | 2022

Successful Management of Tracheal necrosis in a patient who underwent a thyroid lobectomy for potential papillary carcinoma :A Case Report

Before conducting thyroidectomy, Patient are informed about the post-operative complications such as recurrent nerve injury, temporary or permanent damage to parathyroid glands, and sometimes need for additional surgeries. [1]Tracheal necrosis is reported extremely rare in the literature. Tracheal damage such as neck abscess and tracheal necrosis can happen when surgery is involved in the adjacent structures of the trachea. There are very few reported cases of anterior tracheal necrosis following total thyroidectomy. Treatment of such complication is not standardized. [2] Colvin T etal reported a successful management of tracheal necrosis in a patient who underwent a thyroid lobectomy for potential papillary carcinoma

A 31-year- old woman with a past medical history of anxiety was presented with a thyroid nodule that was palpated. Patient was asymptomatic and denied the symptoms of dysphagia, hoarseness of voice, and odynophagia. Patient had a family history of thyroid carcinoma. Ultrasound and FNA revealed a TR3 follicular neoplasm measuring 3.7 × 1.9 × 3.5 cm and pathology suspicious for follicular neoplasm. Pathology showed a suspicious for malignancy indicating a 50% risk of malignancy.Later, Hemithyroidectomy was conducted and pathology revealed follicular variant papillary carcinoma with tumour measuring 3.1 cm with tumor capsule invasion, (stage 1). After a week, patient again underwent a completion thyroidectomy with the removal of any residual thyroid tissue on the right side. Patient was postoperatively in the clinic for 3 days, mild drainage from the incision site was observed along with peri-incisional erythema. cephalexin 500 mg 3 times per day was started. Five days later, patient returned with an open wound and air escape was noted. Wound exploration was performed. Tissue breakdown was noted and debrided between cartilaginous rings 2, 3, and 4 with the largest amount of breakdown between 3 and 4 (Figure 7).

A #6 Shiley tracheostomy tube was placed between 3rd and 4th tracheal rings, with 4–0 Ethilon nylon suture placed on either side of wound. One week later, tracheostomy tube was downsized to a #4 Shiley tracheostomy tube. Passy-Muir tracheostomy swallowing and speaking valve helped the patient to phonate well with a mild amount of air escape in the neck.After 3 month, appropriate stoma closure with no further signs of a tracheocutaneous fistula or symptoms of dysphagia, dysphonia, or stridor was observed.

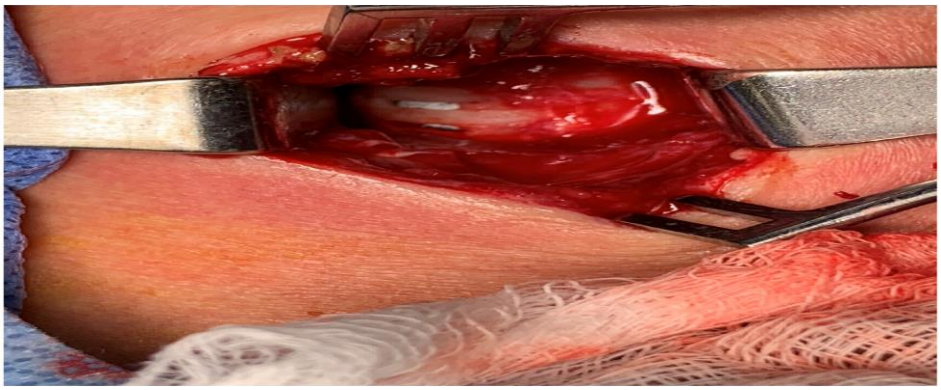


Figure 7: Necrosis of tracheal rings 2–48 days following completion thyroidectomy

Conclusion: This case report described about the delayed tracheal necrosis and its management after a thyroidectomy in a papillary thyroid carcinoma. However, the complication was successfully managed with a temporary tracheostomy

References

1. Colvin T, Selinsky C. Tracheal necrosis following two-stage thyroidectomy: A case report. Clinical Case Reports. 2022 Sep;10(9):e6245.
2. Philippe G,etal . Successful treatment of anterior tracheal necrosis after total thyroidectomy using vacuum-assisted closure therapy. Critical Care Research and Practice. 2012 Oct;2012.