



CASE REPORT

PHÙ REINKE KÉO DÀI

BS TRƯỞNG NGỌC LÊ



CASE REPORT

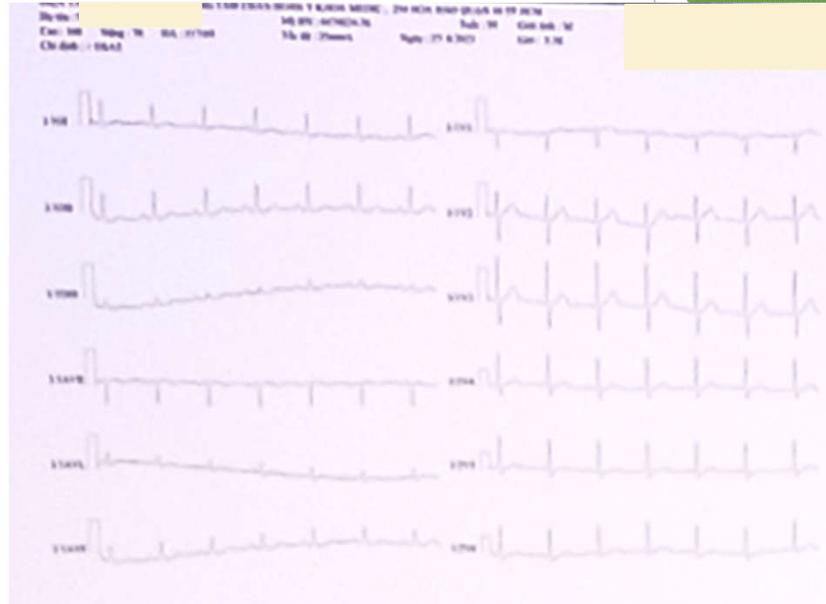
- ▶ Bệnh nhân: Nguyễn Văn..., nam, 59 tuổi
- ▶ ĐC : Khánh Hòa
- ▶ LDĐK: Khàn tiếng
- ▶ Bệnh sử:
 - ▶ Cách nhập viện 2 tháng, bệnh nhân khàn tiếng, tăng dần, cảm giác mệt nói phải gắng sức. Bệnh nhân không tiền sử bệnh dạ dày, trào ngược ddtq, có hút thuốc lá. Bệnh nhân đã điều trị ở nhiều BV không giảm nên đến Medic khám.



CASE REPORT

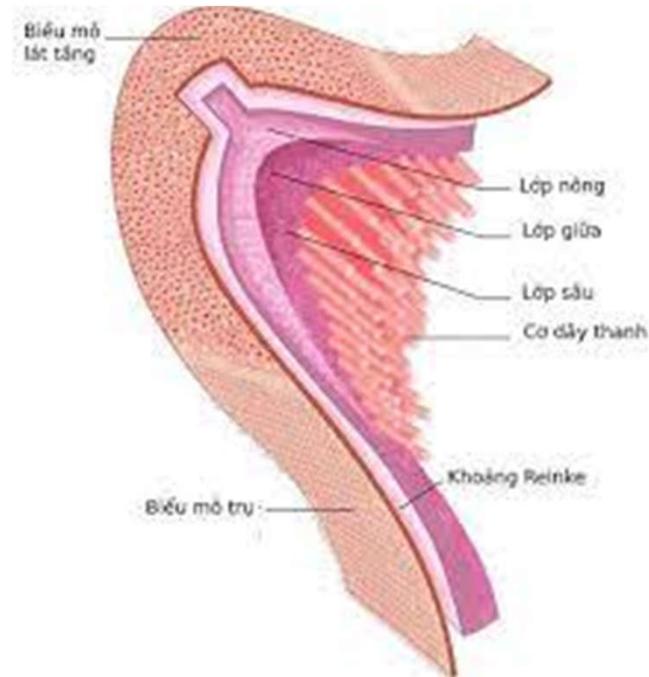
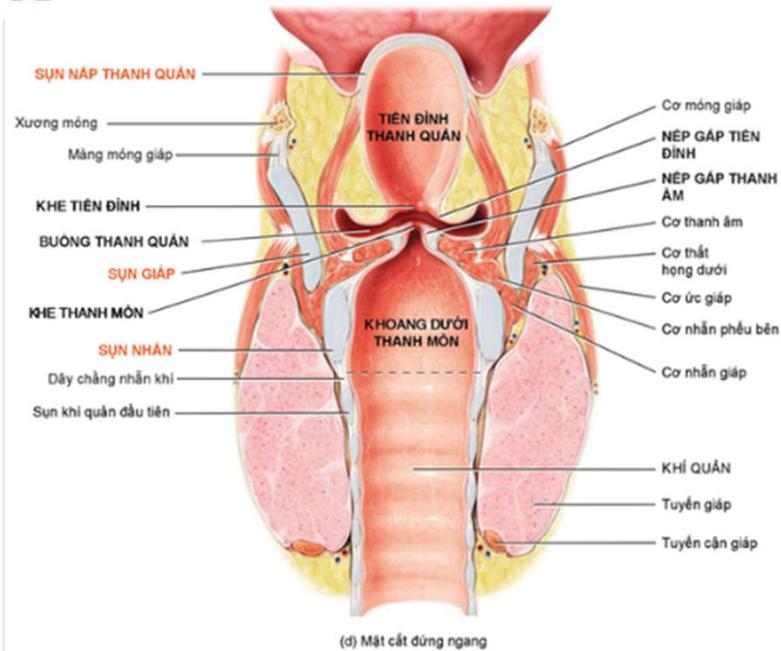


VIDEO





Reinke's edema

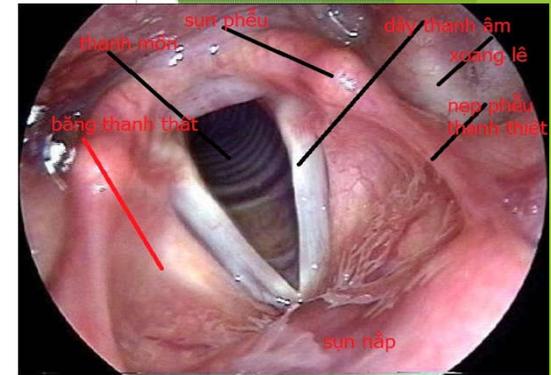


- ▶ Reinke's edema is the swelling of the vocal cords due to fluid (edema) collected within the Reinke's space
- ▶ First identified by the German anatomist Friedrich B. Reinke in 1895, the Reinke's space is a gelatinous layer of the vocal cord located underneath the outer cells of the vocal cord.



Reinke's edema

- ▶ In order for humans to produce sound for speech, the vocal folds must readily vibrate. The two layers of the vocal cords that vibrate are the Reinke's space and the overlying epithelium.
- ▶ Accumulation of fluid within the Reinke's space alters the elasticity of the vocal cord, making it less stiff and more gelatinous. This slows the vocal cord vibration, which results in a deepened and hoarse voice.
- ▶ The pathophysiology or mechanism of Reinke's edema is not well known, however, chemicals contained within cigarette smoke are associated with an increased vascular permeability of blood vessels, which results in fluid leaking into the Reinke's space. Normally, the vocal cords are surrounded by neatly aligned blood vessels, however, these blood vessels can become disarranged and fragile in Reinke's edema
- ▶ Causes :Smoking is the number one cause of Reinke's edema. Other factors include gastroesophageal reflux, chronic overuse of the voice.





Signs and symptoms

List of common symptoms:

- ▶ A "sac-like" appearance of the vocal folds
- ▶ Hoarseness and deepening of the voice
- ▶ Trouble speaking (dysphonia)
- ▶ Reduced vocal range with diminished upper limits
- ▶ Stretching of the mucosa (distension)
- ▶ Shortness of breath (dyspnoea)

The most common clinical symptom associated with Reinke's edema is an abnormally low pitched voice with hoarseness. The low pitch voice is a direct result of increased fluid in the Reinke's space, which vibrates at a lower frequency than normal .





Diagnosis

- ▶ Laryngoscopy :allows the doctor to visualize movement of the vocal cord.various degrees of balloon-like swelling of the vocal folds are seen.
- ▶ Reinke's edema is characterized by a "sac-like" appearance of the vocal folds. The edema is a white translucent fluid that causes a bulging (distension) of the vocal cord.
- ▶ Based on the results of the laryngoscopy, Reinke's edema can be classified using a standardized system set in place by Yonekawa. This system characterizes the disease based on severity.
- ▶ Yonekawa Classification:
 - Grade I - Lesions contact the anterior third of the vocal fold
 - Grade II - Lesions contact the anterior two-thirds of the vocal fold
 - Grade III - Lesions contact the entirety of the vocal fold





Treatment

- ▶ The first step in treating Reinke's edema is to eliminate or control those risk factors that are causing the disease. This includes the cessation of smoking, the control of Gastroesophageal reflux using antacids or Proton Pump Inhibitors (PPIs), and the discontinuation of activities that cause vocal distress.
- ▶ Those experiencing a hoarseness of the voice may choose to undergo voice therapy to improve the voice's quality and range .
- ▶ If is not sufficient to improve the patient's symptoms, surgery may be required.

+The goal of surgical management of Reinke's edema is two-fold. First, to reduce the degenerated excess superficial lamina propria and secondly to preserve the healthy vibratory lamina propria and epithelium.

+Surgical intervention involves making a precise excision of the edematous superficial lamina propria while leaving some gelatinous material to ensure future propagation of the mucosal wave



ĐIỀU TRỊ: PHÁC ĐỒ BỘ Y TẾ

4. Các thể lâm sàng:

4.1. Phù Reinke: Do khoảng Reinke có cấu trúc lỏng lẻo nên dịch viêm tích tụ làm phù nề một hoặc cả hai bên dây thanh, giống như dạng polyp. Bệnh nhân khàn tiếng nặng, kéo dài, tăng dần.

4.2. Hạt xơ dây thanh: VTQ mạn tính tái phát hoặc phát triển thành hạt xơ dây thanh. Hạt xơ là loại u nhỏ bằng hạt tằm nhỏ, đường kính khoảng 1mm, mọc ở bờ tự do của dây thanh ở vị trí 1/3 trước và 1/3 giữa của hai dây thanh. Khi phát âm hai hạt xơ ở hai bên dây sẽ tiếp xúc với nhau làm cho dây thanh ở phía trước và phía sau không thể tiếp xúc được gây ra khàn tiếng.

III. ĐIỀU TRỊ

1. Nguyên tắc điều trị:

- Hạn chế sử dụng giọng khi điều trị bệnh.
- Điều trị tại chỗ: các thuốc giảm viêm, giảm phù nề như: corticoid, men tiêu viêm...
- Điều trị toàn thân: bằng thuốc giảm viêm, giảm phù nề như: corticoide, men tiêu viêm...
- Điều trị các ổ viêm mũi họng, viêm xoang, hội chứng trào ngược dạ dày thực quản và các bệnh toàn thân khác.
- Liệu pháp luyện giọng.
- Phẫu thuật khi điều trị nội khoa không hiệu quả, VTQ có hạt xơ dây thanh.

2. Điều trị cụ thể:

2.1. Tại chỗ: Xông, khí dung hoặc làm thuốc thanh quản: Hydrocortisone + Alpha chymotripsine...

2.2. Toàn thân:

- Chống viêm steroid: prednisolon, methylprednisolon, dexamethasone...
- Chống viêm dạng men: alpha chymotrypsin, lysozym...

2.3. Luyện giọng:

Căn cứ vào tình trạng tổn thương giọng, cách thức sử dụng giọng của bệnh nhân để phối hợp cùng chuyên viên luyện giọng, đưa ra các bài tập thích hợp.

2.4. Phẫu thuật:

Vì phẫu thuật thanh quản qua soi thanh quản trực tiếp hoặc gián tiếp, qua ống soi mềm hoặc soi treo thanh quản...

Chỉ định:

- Phù Reinke
- Hạt xơ dây thanh
- VTQ mạn kết hợp bệnh lý khối u thanh quản

2.5. Nâng đỡ cơ thể: Bổ sung yếu tố vi lượng, sinh tố, vitamin, dinh dưỡng...



BÀN LUẬN:

- ▶ Đa số điều trị nội bệnh nhân khỏi bệnh.
- ▶ Một số trường hợp bệnh kéo dài ,cần phẫu thuật (do phù Reinke có thể dẫn đến nhiều biến chứng lâu dài). Bên cạnh triệu chứng khó phát âm (suy giảm khả năng tạo âm thanh khi nói), biến chứng nghiêm trọng nhất là tắc nghẽn đường thở (do dây thanh bị phù nặng) ,ảnh hưởng công việc và chất lượng cuộc sống.
- ▶ Khi nào cần chỉ định phẫu thuật ,mối liên quan giữa hình thái dây thanh qua nội soi thanh quản và chỉ định phẫu thuật ?



Vocal function in Reinke's edema--degree of the lesion and indication of the operation.

Y Shiba 1, G Mizojiri, T Nozaki

Abstract

Fifty three cases of Reinke's edema were classified into 3 groups according to Yonekawa's proposed classification. Of these cases, 14 were Type I, 22 were Type II and 17 were Type III. In each case, psychoacoustic evaluation using the "GRBAS" scale and phonatory function tests (fundamental frequency, air flow rate, sound pressure level and maximum phonation time) using Nagashima PS-77 phonatory function analyzer were performed. Psychoacoustically, the voice quality before surgery was estimated moderately impaired, in general, with high grade Roughness accompanied by Asthenicity and Strainedness. Cases with more severe lesions showed much worse psychoacoustic evaluation results and severely impaired phonatory function, but they also showed greater improvement after surgery. Phonatory function improved significantly within a month and psychoacoustic evaluation improved significantly from 1 to 3 months after surgery, though neither returned to the normal range. In conclusion, we consider that surgical therapy is appropriate in Type II and III cases, with voice therapy and cessation of smoking also necessary for good recovery.



Reinke's edema management and voice outcomes

[Karuna Dewan](#), MD, FACS, ¹ [Dinesh K. Chhetri](#), MD, FACS, ² and [Henry Hoffman](#), MD ³

Abstract

Objectives

Reinke's edema is a chronic disease of the respiratory tract that occurs in adults with a history of chronic smoke exposure. Also known as polypoid corditis, polypoid laryngitis, and polypoid degeneration of the vocal fold, it is strongly associated with smoking, frequently with vocal misuse/abuse, and occasionally with laryngopharyngeal reflux. Reinke's edema remains a cause of chronic dysphonia that is difficult to manage.

This review provides perspectives on current and future management of Reinke's edema.

Results

Reinke's edema impacts <1% of the population. The excessive mass is seen in polypoid degeneration results in a loss of pitch control and a rough voice. Women are more likely to present for treatment as the characteristic lowering of vocal pitch is more noticeable in women than men. Multiple grading systems have been proposed within the literature. The current standard of care is surgical excision, after smoking cessation. The microflap technique remains the approach of choice for bulky lesions. Surgical management of Reinke's edema has evolved with the introduction of various lasers into otolaryngologic practice; some which can now be used in the office setting. While many management approaches have been described within the literature, there is a little direct comparison and no obvious superior method of Reinke's edema management.

Conclusion

To date, the biology of Reinke's edema is not well understood. Additional research is needed further elucidate the role of uncontrolled reflux in the development and recurrence of Reinke's edema.

1.6. Surgical management of Reinke's edema Initial management of Reinke's edema usually includes recommendation to stop smoking and undergo voice therapy.^{31, 32, 33} When the improvement in voice is not satisfactory for the patient, surgical intervention should be the treatment of choice.³⁴ Uncontrolled LPR is associated with impaired re-epithelialization of the vocal folds after surgical procedures for Reinke's edema.³⁵ The goal of surgical management of Reinke's edema is two-fold. First, to reduce the degenerated excess superficial lamina propria and secondly to preserve the healthy vibratory lamina propria and epithelium. However, it is important to remember that surgical intervention is the first line of treatment when a patient presents with dyspnea, airway compromise, or respiratory distress. Postoperatively, it is important to restore motion of the epithelial layer over the ligament as well as to avoid development of scar. Several therapeutic modalities have been described. Surgical intervention involves making a precise excision of the edematous superficial lamina propria while leaving some gelatinous material to ensure future propagation of the mucosal wave. Surgical intervention may differ based upon different surgical technique and instruments used. After surgical intervention, the inciting stimulus should be reduced whether it is smoking, reflux, or vocal overuse. Postoperative voice therapy is also integral in producing the best possible voice outcome. Surgical intervention for RE can be performed with cold steel technique or with the help of a laser. The mostly commonly utilized lasers are the carbon dioxide (CO₂), potassium titanyl phosphate (KTP) laser, and 445 nm wavelength laser (blue laser).^{36, 37, 38} Cold steel technique ; Microdebrider ; Lasers ; Injection of hyaluronidase ; Intralesional steroid injection



Phonosurgery of Reinke's edema with microdebrider

Egle Grigaliute¹, Maria Novella Fiamingo², Pasquale Gianluca Albanese², Ignazio La Mantia²

Abstract

Purpose: To present our experience with a new microsurgical approach for treatment of the Reinke's edema in suspension laryngoscopy-microdebridement. After a short review of existing literature we introduce speech therapy before and after the surgery into the protocol.

Methods: The authors compare the phonatory outcome, laryngostroboscopic results and subjective improvement of the voice of 30 patients with Reinke's edema that were operated with either microdebridement or cold steel surgery techniques. "Sandwich" speech therapy strategy was applied for the vocal rehabilitation before and after surgery in both patient groups.

Results: After the microdebridement and the speech therapy the mucosal wave was regular, symmetric and periodic in all patients. No signs of abnormal scar tissue or anterior adhesions were observed. Significant improvement of vocal parameters was found after the surgery in both groups of patients: operated with the microdebridement technique and the cold steel technique. The subjective voice evaluated by Voice Handicap Index (VHI-10) was improved for both patient groups in a homogenous way.

Conclusions: Based on the similarity of the vocal outcome in the two groups, microdebridement of the vocal folds is an excellent method for removing the edema of the Reinke's space. Careful suction at a low voltage protects the lamina propria during the microdebridement. The authors discuss the indication to this innovating procedure in patients with difficult laryngeal exposure and small operating field.





This study also shows the preoperative state of Reinke's edema and vocal folds morphology at different stages after combined therapy ([Figure 1](#)).



FIGURE 1. Endoscopic manifestations of Reinke's edema. **A.** Preoperative; **B.** 1month after operation; **C.** 3 months after operation

[VIDEO](#)



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- ▶ Vocal function in Reinke's edema--degree of the lesion and indication of the operation. Y Shiba 1, G Mizojiri, T Nozaki
- ▶ The Clinical Efficacy of Microsuture Technique Combined With Voice Therapy in Patients with Reinke's Edema. Zhitao Fan, Wenxin Dong, Yabo Wang, Jinglei Fang, Xuexia Wang, Xiaolan Zhang



**CẢM ƠN QUÝ THẦY CÔ VÀ
QUÝ ĐỒNG NGHIỆP ĐÃ THEO DÕI**