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Short Communication

# Treatment of chronic nasopharyngitis with monopolar suction diathermy

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**Abstract**

Introduction: Chronic nasopharyngeal infection is rare. To our knowledge, no effective treatment for this condition has previously been described. This report documents our experience of using suction ablation diathermy in this clinical setting.

Method: We performed a prospective review of four patients aged 23–65 years (two men and two women) who presented with chronic nasopharyngitis. Initial medical management consisted of regular saline irrigation plus a 14-day course of doxycycline 100 mg daily, combined with rifampicin 200 mg twice daily. When this proved unsuccessful, patients subsequently received a four-week course of omeprazole 40 mg daily, also unsuccessfully. Given these treatments' lack of success, surgery was undertaken.

Results: Following suction diathermy ablation, nasopharyngeal crusting took four to six weeks to settle. After this, all patients ceased to cough up crusts or infected mucus.

Conclusions: Chronic nasopharyngitis is uncommon. If medical management fails, suction ablation diathermy is a useful surgical treatment option.

**Key words: Nasopharyngitis; Therapy; Diathermy**

## Introduction

Chronic nasopharyngeal infection is rare. In clinical practice, patients present complaining of crusts and/or discoloured mucus streaming down the back of the throat, which they cough up. Endoscopically, a central area of crusting in the midline of the nasopharynx can be visualised. Infection of Tornwaldt's bursa has been implicated.[1] This condition has also been described as chronic adenoiditis.[1]

To our knowledge, no effective medical or surgical treatment for chronic nasopharyngitis has previously been described. This report documents our experience of using suction ablation diathermy in this clinical setting.

## Patients and methods

We performed a prospective review of four patients aged 23–65 years (two men and two women) who presented with chronic nasopharyngitis. Patients typically presented complaining of post-nasal mucus, and reported coughing up infected mucus and/or small crusts. Symptoms generally improved with antibiotics, only to relapse soon after treatment was ceased.

Nasopharyngeal bacteriology culture swabs grew *Staphylococcus aureus* (two patients), *Klebsiella oxtoca* and a heavy growth of mixed bacterial species. All four patients had normal sinus computed tomography scans and normal sinus nasendoscopy appearances. None had undergone previous radiotherapy. Two patients had undergone previous, unsuccessful endoscopic sinus surgery for their condition.

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### *Surgical technique*

As the technique described below had already been used successfully on previous patients by one of the authors (CB) for the preceding five years, and as both authors were experienced in using the technique for adenoidectomy, no institutional review was felt necessary.

The surgical technique used a conventional adenoidectomy approach. The patient was positioned in a routine adenoidectomy position and a Boyle–Davis mouthguard placed. A size eight catheter was passed through one nostril and drawn out the mouth to hold the soft palate forward. The nasopharynx was then visualised indirectly with a dental mirror. The tip of a single use, bendable, insulated diathermy needle was then bent so it could pass behind the soft palate. The diathermy level was set to fulgurate, with the cutting mode turned off at a level of 40.

Under indirect vision, the central region of the nasopharynx was then carefully assessed. The crust, if present, was removed using suction and sent for microbiological

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culture. The initial burn was placed in the central region where the crust had been. This allowed the surgeon to assess the depth of the pit (where the crust had been) by feel. The initial cauterisation time was 5–10 seconds. The area surrounding the crust was then 'saucerised' while continually assessing the depth and size of the burn.

Post-operatively, patients were treated with doxycycline 100 mg daily for 10 days, plus regular saline irrigation.

## Results

Following suction diathermy ablation, nasopharyngeal crusting took four to six weeks to settle. After this time, all patients ceased coughing up crusts or infected mucus.

On follow-up endoscopy, one patient still had a small area of residual infection (2–3 mm in diameter), which was asymptomatic. She declined further treatment.

All patients were followed up for a minimum of six months.

## Discussion

The advent of rigid and flexible nasendoscopes has made nasopharyngeal pathology easier to evaluate and treat. Acute bacterial nasopharyngitis or adenoiditis has been described in adults. In the paediatric age group, this diagnosis is usually made together with adenoidal hypertrophy.[2] In adults, chronic bacterial nasopharyngitis, and its appropriate management, have been poorly described. Clinically, there would appear to be two forms of chronic nasopharyngitis: diffuse and localised. Diffuse chronic nasopharyngitis is frequently seen after regional radiotherapy. Localised chronic nasopharyngitis, in which an infected crust can be visualised in the midline of the nasopharynx, is also recognised but is uncommon.[1] This paper describes an effective surgical treatment for the latter condition.

The aetiology of chronic localised nasopharyngitis is unknown. Laryngopharyngeal reflux has been implicated in the development of chronic nasopharyngitis; however, to our knowledge, objective data supporting this theory have not been published.[3] In our series, positive bacteriology cultures were obtained in all cases. Nasopharyngitis may arise from infection in the pharyngeal bursa (pouch of Luschka), a blind recess in the middle of the nasopharynx derived embryologically from the notochord attachment.[1,4]

Simplistically speaking, the described surgery may be efficacious because it exteriorises a potential pocket of infection. Alternatively, suction diathermy ablation may lead to physical disruption of an area of localised biofilm.[5,6] Healing and host defences may then be able to trigger biofilm clearance.

The limited number of cases reported in this series makes it difficult to assess the complication rate for suction diathermy ablation. However, when the same technique is used for paediatric adenoidectomy the complication rate is extremely low.[7,8]

Chronic nasopharyngitis is uncommon. If medical management fails, suction ablation diathermy is a useful surgical treatment option.

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