

# Non-Surgical Resolution of Spontaneous Cerebrospinal Fluid Rhinorrhoea: A Case Report

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DOI: <https://doi.org/10.52403/gijhsr.20250412>

## ABSTRACT

Spontaneous cerebrospinal fluid (CSF) rhinorrhoea is a rare condition that poses diagnostic and therapeutic challenges. We report the case of a 34-year-old female who presented with persistent watery nasal discharge from the left nostril for four months. Computed tomography confirmed CSF leakage. The patient was managed using a functional integrative medicine protocol designed to restore physiological balance, optimize mucosal integrity, and enhance dural healing. The approach incorporated personalized nutrition, anti-inflammatory dietary strategies, nutraceutical support, adaptogenic phytomedicine, glandular therapy, acupuncture, and cranial pressure regulation practices. These interventions provided non-invasive support to the body's natural repair mechanisms and reduced procedural risks. Complete and sustained recovery was achieved without surgical intervention. This case highlights the potential role of integrative medicine as a noninvasive and effective alternative in the management of spontaneous CSF rhinorrhoea.

**Keywords:** cerebrospinal fluid rhinorrhoea, integrative medicine, functional medicine, case report, non-invasive therapy

## INTRODUCTION

Cerebrospinal fluid (CSF) rhinorrhoea is a rare but clinically significant disorder characterized by abnormal communication between the subarachnoid space and extracranial regions, resulting in CSF leakage [1-3]. Epidemiological studies indicate that approximately 44% of cases are trauma-related, 12% are iatrogenic, and nearly 28% occur spontaneously without identifiable precipitating factors [4]. The most common clinical feature is unilateral, clear watery nasal discharge with a metallic or salty taste, often positional or exertional, and unresponsive to routine medication. Middle-aged females with obesity are more frequently affected [5]. Associated symptoms may include intracranial hypertension, papilloedema, positional headaches, diplopia, balance dysfunction, and pulsatile tinnitus [6,7]. High-resolution computed tomography and MR cisternography are valuable in localizing skull base defects and confirming diagnosis [4].

Untreated CSF rhinorrhoea carries a significant risk of meningitis. Early recognition of unilateral watery nasal discharge, particularly in patients with a history of trauma or surgery, is essential to avoid misdiagnosis as allergic rhinitis. Management strategies range from conservative measures to surgical repair, depending on severity and underlying cause.

However, some patients seek non-invasive alternatives.

This case report highlights the role of functional and integrative medicine as a holistic, individualized, and non-invasive approach to managing spontaneous CSF rhinorrhoea. The protocol emphasizes restoration of physiological balance, optimization of mucosal integrity, and enhancement of dural healing through personalized nutrition, lifestyle modification, nutraceuticals, anti-inflammatory dietary interventions, and cranial pressure regulation practices.

### CASE PRESENTATION

A 34-year-old female presented with a four-month history of persistent watery nasal discharge from the left nostril, accompanied by a dull left-sided headache. Symptoms worsened in the forward-leaning position and during exertion, while lying supine resulted in wetting of the pillow. The discharge was clear, odorless, abundant, and free of blood. There was no history of vomiting, fever, nasal obstruction, facial heaviness, dysphagia, throat pain, accidental head injury, or prior skull surgery.

Initially, she was diagnosed with allergic rhinitis; however, symptoms did not improve with antiallergic therapy. Computed tomography subsequently confirmed CSF leakage and rhinorrhoea (*Figure 1*). Surgical intervention was advised, but the patient declined and sought a non-invasive alternative.

Her past medical history included excessive weight gain over two years, irregular painful menstrual cycles for four months, and a history of abortion eight years earlier. She had no significant comorbidities, maintained a mixed diet, and reported normal bowel and bladder habits. She was a non-smoker and non-drinker. Clinical examination revealed no cyanosis, clubbing, oedema, or lymphadenopathy. Her weight was 57 kg, height 155 cm, and blood pressure within normal range.

The patient was managed with a functional integrative medicine protocol. This included glandular therapy derived from bovine brain cells to support central nervous tissue regeneration, nutraceuticals such as Ginkgo biloba, magnesium, omega-3 fatty acids, and adaptogenic herbal formulations to enhance healing and reduce inflammation. A customized organic low-carbohydrate diet was prescribed, and acupuncture therapy was initiated.

Significant improvement was noted after the first visit, and treatment continued for four months. At the end of therapy, all symptoms of CSF rhinorrhoea had resolved. The patient declined follow-up imaging due to complete clinical recovery and preference to avoid radiation exposure. During three months of post-treatment observation, she remained symptom-free, resumed normal daily activities, and demonstrated no recurrence of nasal discharge or neurological complaints.

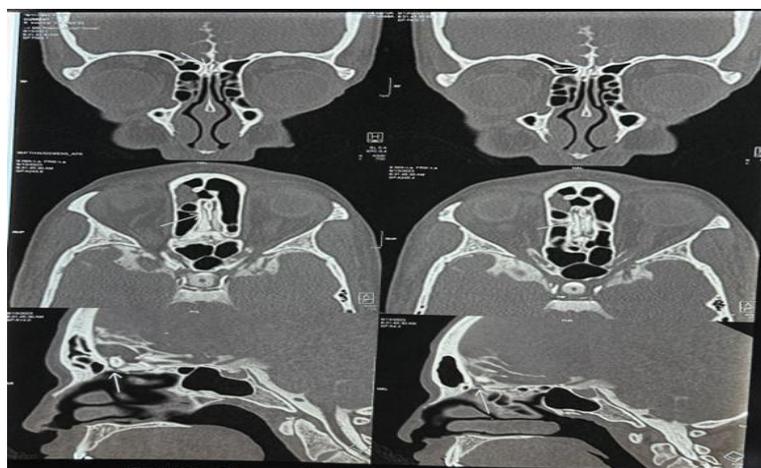


Figure 1: CT showing CSF leak

## DISCUSSION

Cerebrospinal fluid (CSF) rhinorrhoea is an uncommon condition characterized by abnormal communication between the subarachnoid space and the sinonasal cavity. It may occur secondary to skull base trauma, endoscopic sinus or neurosurgical procedures, or spontaneously without identifiable cause [9]. Conventional management strategies include surgical repair, bed rest, and lumbar drainage [8]. However, recurrence and postoperative complications are not uncommon, particularly in patients with idiopathic intracranial hypertension or connective tissue weakness [10,11].

In the present case, spontaneous CSF rhinorrhoea was successfully managed using a comprehensive functional integrative medicine protocol. The regimen included bovine brain glandular extract, Ginkgo biloba, magnesium, omega-3 fatty acids, and an adaptogenic herbal formulation, combined with a personalized low-carbohydrate organic diet and acupuncture therapy. These interventions were intended to support central nervous system repair, reduce systemic inflammation, improve microvascular blood flow, and accelerate connective tissue healing.

The patient demonstrated complete resolution of nasal discharge and neurological symptoms within four months of treatment, with sustained improvement during three months of follow-up. Although imaging confirmation was not obtained, the long-term absence of symptoms strongly suggests successful dural healing. Literature supports the role of Ginkgo biloba in enhancing cerebral blood flow [12,13], omega-3 fatty acids in modulating inflammation and neuronal membrane repair [14–18], and magnesium in stabilizing neuromuscular function and regulating vascular tone [19]. Adaptogenic herbs may further contribute to wound healing by balancing cortisol activity and enhancing immune response [19–23]. Nutritional therapy, particularly a low-carbohydrate nutrient-dense diet, reduces systemic

inflammation and supports collagen and myelin tissue repair [24].

While direct comparison with surgical outcomes is not possible, this case highlights the potential of non-invasive, system-based therapies in facilitating spontaneous dural closure. Few reports have documented similar recoveries, underscoring the novelty of this approach.

This observation emphasizes the importance of holistic evaluation in complex neurocranial pathologies. By targeting the body's intrinsic repair mechanisms rather than focusing solely on structural correction, integrative medicine may provide a favorable physiological environment for natural healing. Nevertheless, as a single-patient report, causality cannot be conclusively established. Future controlled studies with biochemical and imaging follow-up are required to validate the reproducibility and mechanisms of such integrative neuroregenerative protocols.

## CONCLUSION

This case demonstrates that a functional integrative medicine protocol combining glandular therapy, adaptogenic phytochemistry, nutritional optimization, and acupuncture can facilitate complete and sustained recovery from spontaneous CSF rhinorrhoea. It underscores the potential of personalized, non-surgical interventions in neurological repair and dural healing, opening an important dialogue on holistic approaches to complex neurocranial pathologies.

### *Declaration by Authors*

**Acknowledgement:** None

**Source of Funding:** None

**Conflict of Interest:** The authors declare no conflict of interest.

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- How to cite this article: Mohammad Mojibul Haque, Syeda Shayan Zehra. Non-surgical resolution of spontaneous cerebrospinal fluid rhinorrhoea: a case report. *Gal Int J Health Sci Res.* 2025; 10(4): 104-108. DOI: <https://doi.org/10.52403/gijhsr.20250412>

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