Acupuncture treatment of empty nose syndrome: A case report

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Abstract

Background: Empty nose syndrome (ENS) is an iatrogenic disorder that most commonly presents with paradoxical nasal obstruction. Diagnosis of ENS is based mainly on symptomatology and surgical history. Symptomatic or surgical treatment is typically offered to patients.

Case presentation: A 17-year-old Chinese male presented with ENS following inferior turbinate resection. His main symptoms were dizziness and nasal congestion. He was diagnosed with a traditional Chinese medicine syndrome pattern of liver yang ascending. Acupuncture treatment involved needling ST 36 (Zusanli) GB 20 (Fengchi), PC 6 (Neiguan), LI 4 (Hegu), LR 3 (Tai-chong), LR 2 (Xingjian), GB 43 (Xiaxi), DU 20 (Baihui), EX-HN3 (Yintang), ST 2 (Sibai), and LI 20 (Yingxiang). Near complete resolution of dizziness and nasal congestion were achieved after 2 treatments.

Conclusion: Acupuncture may be used to resolve symptoms of ENS. Acupoint selection and needle manipulation should be based on TCM pattern diagnosis.

Introduction

Empty nose syndrome (ENS) is an iatrogenic disorder secondary to inferior turbinate and/or middle turbinate resection. Patients’ primary complaint is nasal obstruction, which has been termed “paradoxical”, as there is no physical obstruction since the turbinate(s) has been removed. This can be accompanied by dryness of the nose and throat, sensation of suffocation, loss of smell, head and facial pain during breathing, and dizziness. Nasal examination often reveals a reduced or unchanged mucosal surface, a normal or larger nasal cavity, and nasal crusting in some patients. Diagnosis of ENS is based primarily on subjective symptomatology and surgical history and typically not on objective diagnostic evidence. Treatment includes symptomatic treatment such as lavage (saline, sulfur...
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derivatives), ointments, aerosols, local application of antibiotics and surgical treatment involving turbinate reconstruction, most commonly using biosynthetic and autologous cartilage.1–7

To our knowledge there are no other reports in the literature of acupuncture treatment for ENS. We describe a patient with ENS who was treated successfully with acupuncture.

Case presentation

A 17-year-old Chinese male developed nasal obstruction accompanied by a runny nose and dizziness after catching a cold in August 2014. These symptoms worsened over the next 6 months. No abnormal findings were observed on cranial CT, which he underwent in January 2015. In February 2015, he was seen in the department of otolaryngology and diagnosed with anterior ethmoid neuralgia secondary to nasal septum deviation, and chronic hypertrophic rhinitis. Anterior rhinoscopy revealed a normal nasal shape, mucosal congestion that was unresponsive to ephedrine application, and left deviation of the sinus septum, pressing on the middle and inferior turbinate and narrowing of the left nasal cavity. There was also inferior turbinate swelling, reduced nasal discharge in the middle and inferior meatus, and no excrescence in the nasal cavity. Two days later, the patient underwent endoscopic septoplasty and partial inferior turbinectomy. During postoperative follow-up, he reported a mild headache that lasted for 6 days after discharge.

Repeat examination in May 2015 revealed that the wound had healed well, the nasal septum was midline, and there was no inferior turbinate swelling. The patient did report that he had been experiencing dizziness, headache, and nasal congestion in the past month. But the symptoms were mild, so he sought not further treatment.

The next month, the patient returned to the clinic complaining of worsening dizziness and nasal congestion, such that he was unable to go to work and was bedridden most of the time. There was no significant improvement after oral administration of acetaminophen and aspirin. He also presented with eye swelling and dryness, blurred vision, and abnormal sensations around the nose and eyes, but no tenderness.

In June 2015, the patient presented at our acupuncture clinic. We made a Western medicine diagnosis of empty nose syndrome-inferior turbinate (ENS-IT) and a TCM diagnosis of dizziness with liver yang ascending. During acupuncture treatment he was in a sitting position. Needles (diameter 0.3 mm; length 25 mm) were inserted 3–5 mm into ST 36 (Zusanli) with reinforcing manipulation; GB 20 (Fengchi), PC 6 (Neiguan), LI 4 (Hegu), LR 3 (Tai-chong), LR 2 (Xingjian), and GB 43 (Xiaxi) with reducing manipulation; and DU 20 (Baihui), EX-HN3 (Yintang), ST 2 (Sibai), and LI 20 (Yingxiang) with uniform reinforcing-reducing manipulation. The needles were left in place for 25 min after deqi was obtained and were twirled every 5 min. After the needles were removed, the patient reported his symptoms were relieved but that he was experiencing postnasal drip and was nauseated. Five minutes later, he reported that the dizziness and nasal congestion had returned, but were less severe than before treatment.

During his second visit the following day, the patient reported dizziness and nasal congestion were improved, and eye swelling and dryness, blurred vision, and abnormal sensations around the eyes and nose were completely relieved. A second treatment using the same needling methodology was then performed, after which he reported the dizziness and nasal congestion were almost completely relieved.

At the third visit the next day, the patient reported he was able to breathe freely but still had slight dizziness. We elected not to perform acupuncture for that ENS was usually associated with psychological disorders8 and we didn’t expect to give him too much acupuncture stimulation. Instead, he was advised to rest. All symptoms were relieved on a subsequent visit in July 2015.

Discussion

In Western medicine, palliative treatment of ENS includes hydration with lavage (saline, sulfur derivatives), ointments, or aerosols. Local application of antibiotics is also recommended if there is crusting.1–7 Various surgical options, such as submucosal implantation, are also attempted with varying success.1–7 In this presented case, acupuncture achieved promising results. During diagnosis of this patient, we referred to the Sino-Nasal Outcome Test-25 (SNOT-25), an assessment tool to help identify and diagnose ENS.1 While the 25 symptoms/items in SNOT-25 cannot be used to diagnose subtypes of ENS,1 we propose 3 categories of TCM syndrome patterns based on the 25 symptoms: lung qi stagnation, liver yang ascending, and heart shen dysfunction (Table 1).

Based on TCM theory, we hypothesize 3 syndrome patterns at different stages of ENS, starting with lung qi stagnation, progressing to liver yang ascending, and finally to heart shen dysfunction. Symptoms of lung qi stagnation will be easier to treat because the condition is in the early stage. But there may be another possibility that if the stage of “Liver Yang ascending” or “Heart Shen dysfunction” lasts long and the patient has been coexisting with the new nasal environment for long time, symptoms will disappear immediately with acupuncture treatment.

Our patient’s main symptoms were consistent with the pattern of liver yang ascending and results of acupuncture at the selected points were successful. It is unclear whether acupuncture is effective only for this patient or may be for all ENS patients. It is also unknown if acupuncture is effective for the liver yang ascending pattern only and not the other 2 patterns. Finally, it is not known whether acupuncture treatment can change the structure of the nasal cavity, or just improve the environment of the nasal cavity or if the effects of acupuncture take place in the nasal cavity locally, or via the central nervous system.9 Therefore, additional evidence-based studies are needed to validate acupuncture as an alternative therapy for ENS.

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Conclusion

Acupuncture may be considered as an alternative treatment of empty nose syndrome. Effective treatment may be realized if the proper syndrome pattern is diagnosed and the correct acupoints are used.

Conflicts of interest

The authors declare no conflicts of interest.

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Authors’ contributions

HB managed the case with full responsibility and wrote the manuscript. QZ oversaw the treatment and revised the manuscript.

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<th>Main manifestation</th>
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<td>Lung qi stagnation</td>
<td>Nasal congestion</td>
<td>1. Need to blow nose; 2. Sneezing; 3. Runny nose; 4. Cough; 5. Postnasal discharge; 6. Thick nasal discharge; 22. Difficulty with nasal breathing; 23. Suffocation; 24. Nose is too open; 25. Nasal crusting</td>
<td>GB 20 (Fengchi), PC 6 (Neiguan), LI 4 (Hegu), LU 7 (Lieque), LU 5 (Chize), CV17 (Danzhong), GV 20 (Baihui), EX-HN3 (Yintang), ST 2 (Sibai), LI 20 (Yingxiang)</td>
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<td>Heart shen dysfunction</td>
<td>Psychological dysfunction</td>
<td>16. Reduced productivity; 17. Reduced concentration; 18. Frustration/restlessness/irritability; 19. Sadness; 20. Embarrassment</td>
<td>ST 36 (Zusanli), CV 6 (Qihai), CV 4 (Guanyuan), PC 6 (Neiguan), HT 7 (Shenmen), GV 20 (Baihui), EX-HN3 (Yintang), ST 2 (Sibai) (ST 2), LI 20 (Yingxiang)</td>
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References