

Acupuncture for Intractable Oesophageal Spasm

By: Christopher G.
Tang and Anthony
F. Jahn

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Abstract

Objective: To review a case of intractable oesophageal spasm treated with acupuncture alone.

Case: A 22 year-old Caucasian right-handed female presented to the head and neck surgery clinic with a two-year history of dysphagia. The patient had difficulty swallowing solids and liquids and therefore received an extensive work-up, including two upper gastrointestinal endoscopies with oesophageal biopsies, as well as a barium swallow. Biopsy results revealed no evidence of Crohn's oesophagitis or eosinophilic oesophagitis, and only mild evidence of gastro-oesophageal reflux disease. A barium swallow showed diffuse moderate oesophageal spasm. The patient was treated with multiple modalities, including anti-reflux medication, swallowing therapy and endoscopic oesophageal dilation, without any benefit. Although the reflux was controlled, the dysphagia persisted. The patient was therefore referred to the senior author for other modalities of treatment.

Methods: The patient was evaluated for diffuse oesophageal spasm and treated with acupuncture alone. Acupuncture points included auricular points for the oesophagus and gastric antrum in the right ear, Shenmen in the left ear, and Baihui DU-20 on the scalp.

Results: The patient's symptoms of dysphagia completely resolved within 24 hours. She was able to swallow both solids and liquids normally, without any further medical intervention. The patient returned to clinic approximately every three months for further acupuncture treatment, whenever her symptoms recurred.

Conclusion: Acupuncture may be a viable alternative for select patients who fail to respond to conventional treatment for diffuse oesophageal spasm.

Case

A 22 year-old Caucasian right-handed female presented to head and neck surgery clinic with a two-year history of dysphagia. The patient's dysphagia was worse with soft foods like ice cream and liquids, and could also be evoked by quick eating and drinking. Her past medical history was relevant only for Crohn's disease in the lower gastrointestinal (GI) tract, which was controlled by 800 milligrams mesalamine orally, taken twice a day. The patient had no tobacco exposure, and only social alcohol usage. A thorough review of systems was positive only for regurgitation of food and dysphagia.

Prior to presentation, the patient had undergone two separate upper GI endoscopies with oesophageal biopsies. Fine nodules were noted in the mid and proximal oesophagus, which was otherwise normal. Biopsies revealed squamous mucosa with mild inflammatory changes suggestive of mild gastro-oesophageal reflux disease (GERD) with no abnormal glandular mucosa, and were negative for both eosinophilic oesophagitis and upper GI tract inflammatory bowel disease (e.g. upper GI Crohn's disease). No detectable organic disease was noted in her entire gastrointestinal tract on these examinations. Barium swallow in 2004 had also been negative.

The patient had failed multiple treatment modalities prior to presentation. She had received oesophageal dilation after each GI endoscopy in 2004 and 2007.

This procedure involves the patient's oesophagus being mechanically stretched open with firm dilating tubes that are inserted through the mouth and into the oesophagus under direct visualisation. The patient received minimal short-term improvement after these dilations. A follow-up barium swallow revealed continuing diffuse moderate oesophageal spasm. Empiric medical management was unsatisfactory, with no benefit from prescription of 300 milligrams of oral ranitidine twice daily, and only a very slight improvement from over-the-counter Prilosec (omeprazole) at a dose of 20 milligrams daily. The patient also did not receive any benefit from swallow therapy, which involved working with a speech and swallow therapist on swallowing techniques.

Methods

The patient was evaluated by the senior author for diffuse oesophageal spasm and treated with acupuncture alone. The following acupuncture points were used:

- Auricular points Oesophagus and Gastric Antrum in the right ear (corresponding to the specific points on the ear homunculus – see Figures 1A & 1B)
- Auricular Shenmen in the left ear (Figures 2A & 2B)
- Baihui DU-20 on the scalp (Figure 3)

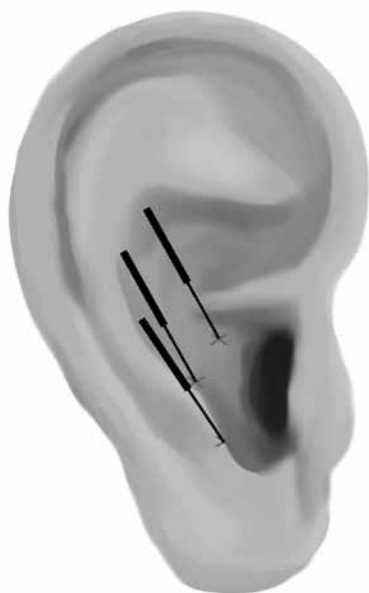


Figure 1A: The points for the oesophagus and gastric antrum in the right (dominant) ear based on the auricular homunculus



Figure 1B: Photograph of the auricular acupuncture points placed



Figure 2A: Shenmen in the left (non-dominant) ear



Figure 2B: Photograph of the Shenmen point placed

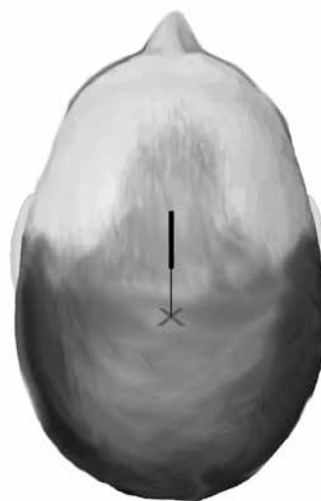


Figure 3: Baihui DU-20.

Ear point selection was based on the anatomic location of the symptoms, using the ear on the side of the dominant hand for somatic symptoms following the method of Bahr & Strittmatter (2010).¹ We used the auricular point Shenmen on the side of the non-dominant hand to address the possible stress trigger for the patient's cricopharyngeal hypertonicity (globus syndrome). The ear points were located based on increased sensitivity to touch.² Baihui DU-20 was added as a general yang harmonising point and for psycho-emotional calming. Seirin D-type No. 3 (0.20mm × 15mm) stainless steel needles, were used in the ear, and retained for 20 minutes, with intermittent rotation stimulation. Baihui DU-20 was needled with a Seirin J-type No.3 (0.20mm × 30mm) needle, which was retained for 20 minutes with intermittent stimulation.

Results

After the first treatment, the patient was due to consult yet another gastroenterologist. She called next day to report that she was cancelling that appointment, since the symptoms of dysphagia had completely resolved within

24 hours. She has since been able to swallow both solids and liquids normally, without any further intervention. The patient returns to clinic every three months for acupuncture treatment when the symptoms start to recur, and has had no other problems since starting acupuncture treatment. She has now been treated in this manner for over five years. She did not pursue further objective testing as her symptoms have abated.

Discussion

There have been relatively few articles published in the general literature that pertain to the use of acupuncture in the field of otolaryngology, with only 48 articles identified on a Pubmed search. Acupuncture has been mentioned in some prominent articles supported by the American Academy of Otolaryngology – Head and Neck Surgery. The 2015 Clinical Practice Guideline for Allergic Rhinitis suggests offering the option of acupuncture for patients who are interested in non-pharmacologic therapy (based on Grade B-level evidence).³ Acupuncture for post-tonsillectomy pain in children has also been proven to be an effective treatment option in a randomised, controlled, single-blinded study.⁴

With respect to acupuncture specifically for oesophageal spasm, Yin et al. in a 2010 review showed that the effects of acupuncture or electro-acupuncture (EA) on GI motility were fairly consistent, with the major points used being Zusanli ST-36 and Neiguan P-6. Nonetheless more studies are needed to establish the therapeutic role of EA in treating functional GI disease.⁵ A study by Xia et al. showed that acupuncture combined with standard swallowing training may be beneficial for dysphagia patients after stroke.⁶ A randomised control trial by Chan et al. demonstrated that acupuncture may have therapeutic effects and long-term efficacy for neurogenic dysphagia, although due to an insufficient sample size and the lack of follow-up, multi-centre trials employing a larger sample size are required to draw concrete conclusions.⁷

The conventional medical diagnosis of dysphagia due to oesophageal dysfunction is rather broad. It includes mechanical obstruction by lesions either intrinsic or extrinsic to the oesophagus, neuromuscular disorders, reactive dysfunction such as that seen with gastro-oesophageal reflux, as well as psychosomatic reaction. The original term ‘globus hystericus’ (now called ‘globus syndrome’ or ‘globus pharyngeus’) implied that the sensation of a lump was due to hysteria.

The diagnostic work-up for oesophageal dysfunction normally includes visual examination of the hypopharynx and oesophagus (endoscopy), and imaging studies such as barium swallow and cine barium swallow to evaluate function. If an abnormality is found, biopsy or dilatation of the oesophagus may be recommended. If, after a full diagnostic battery, no proximate cause is identified, various classes of medications may be used on a therapeutic trial

basis. These include acid inhibitors and antacids, anxiolytics and muscle relaxants. There is however a group of patients where a diagnosis cannot be made, and who fail to respond to conventional Western therapy.

In this case, we employed auricular acupuncture points on her dominant side that anatomically correspond to the upper and mid oesophagus, as well as auricular Shenmen on the non-dominant side. We added Baihui DU-20 to connect and harmonise the yang channels. Since this case, we have treated three other patients with similar presentations, who also responded to a single acupuncture treatment without the need for follow up. We also treated an elderly man who presented with dysphagia following stroke, who showed marked, albeit incomplete, improvement.

The patient in this case returns every three months for a treatment, as after three months her symptoms typically reassert themselves. For instance, she missed one appointment, and on her return (four months later) she described markedly greater inability to swallow solids and regurgitation. Interestingly, the ear points at this time were significantly more tender on needling than at previous appointments.

Conclusion

Any disorder needs to be evaluated using conventional biomedical modalities, in an attempt to make a diagnosis, or at least to rule out significant and potentially harmful conditions. However, in a case like this where the patient’s dysphagia has been comprehensively assessed and finally consigned to the ‘idiopathic’ category, acupuncture should be considered as an option. It is simple, low-tech and low cost, avoids drug-associated side effects, and often highly effective.

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Anthony Jahn, MD, FACS, FRCS(C), senior ear, nose and throat surgeon at Mount Sinai/Roosevelt Hospital (New York), has been integrating clinical acupuncture into his practice of otolaryngology for several years. He obtained his acupuncture training in New York through the American Academy of Acupuncture (Dr. Peter Teng) and the Hospital for Traditional Chinese Medicine in Chengdu (China). For several years, Dr. Jahn taught a course on acupuncture to otolaryngologists at the American Academy of Otolaryngology/Head and Neck Surgery.

Christopher Tang, MD, FACS is a practising laryngologist in the Department of Head and Neck Surgery at Kaiser Permanente Medical Center in San Francisco. He went to medical school at UCLA, and did his residency at Kaiser Permanente Medical Center in Oakland. He then spent a year in New York City doing a laryngology/neurolaryngology fellowship at the New York Center for Voice and Swallowing Disorders, working with Dr. Andrew Blitzer and Dr. Anthony Jahn.

References

(Endnotes)

- 1 Bahr, F. & Strittmatter, B. (2010). *Das Grosse Buch der Ohrakupunktur*, Hippokrates Verlag: Stuttgart
- 2 Using the 'Very-Point Technique'—a method widely-used in Europe to locate active points and described in Gleditsch, J.M. (1980). "Punktsuche und Ermittlung von Reaktionsniveaus mit Hilfe der Very-Point-Technik", *Akupunktur-Theorie und Praxis*, 8, 58-61. See also Rubach, A. (1995). *Propädeutik der Ohrakupunktur*. Hippokrates Verlag: Stuttgart, and Ogal, H.P. & Kolster, B.C. (2003). *Ohrakupunktur fuer Praktiker*. Hippokrates Verlag: Stuttgart
- 3 Seidman, M.D., Gurgel, R.K., Lin, S.Y., et al. (2015). "Guideline Otolaryngology Development Group. AAO-HNSF. Clinical practice guideline: Allergic rhinitis", *Otolaryngol Head Neck Surg*. 152(1 Suppl), S1-43.
- 4 Gilbey, P., Bretler, S., Avraham, Y. et al. (2015). "Acupuncture for posttonsillectomy pain in children: a randomized, controlled study", *Paediatr Anaesth*. 25(6), 603-9
- 5 Yin, J. & Chen, J.D. (2010). "Gastrointestinal motility disorders and acupuncture", *Auton Neurosci*. 157(1-2), 31-7.
- 6 Xia, W., Zheng, C., Zhu, S. et al. (2015). "Does the addition of specific acupuncture to standard swallowing training improve outcomes in patients with dysphagia after stroke? A randomized controlled trial", *Clin Rehabil*. 2015 Mar 26. pii: 0269215515578698. [Epub ahead of print]
- 7 Chan, S.L., Or, K.H., Sun, W.Z. et al. (2012). "Therapeutic effects of acupuncture for neurogenic dysphagia—a randomized controlled trial", *J Tradit Chin Med*. 32(1), 25-30.