

Avicenna's Viewpoints on Dysphonia

Dear Editor

Dysphonia is a common voice disorder that affects about one-third of the population at some point in their lives.¹ The terms dysphonia and hoarseness are frequently used interchangeably. However, dysphonia is a disorder characterized by changes in vocal quality, pitch, and loudness or vocal effort. Patients with dysphonia are unable to communicate properly, and their voice-related quality of life (VR-QOL) is negatively affected. On the other hand, hoarseness is the symptom of a change in voice quality as perceived by the patients. Dysphonia affects people of all ages and sex, but is more common among older adults and professions requiring considerable vocal demands.¹ While dysphonia is primarily caused by benign or self-limiting conditions, it may also be indicative of a serious or progressive disease such as head and neck cancer that requires prompt diagnosis and treatment. Other causes of dysphonia include neurological, gastrointestinal, musculoskeletal, psychological, and trauma disorders, as well as rheumatologic/autoimmune, allergic, pulmonary, and infectious diseases.^{1,2} Various treatment modalities have been proposed to address the underlying medical conditions related to dysphonia and voice disorder, e.g., voice therapy, augmentative and alternative communication, and surgery. Palliative care provides symptomatic relief and can significantly improve VR-QOL in these patients.²

Ibn Sina (980-1037 AD), known as Avicenna in the Western world, recognized dysphonia as an illness and proposed various treatments. He is a renowned Persian polymath during the Islamic Golden Age (8th to 13th century AD), who profoundly contributed to our current understanding of medicine.³ His masterpiece "*Al-Qānūn fī al-Tibb*" (the Canon of Medicine) is an encyclopedia of medicine used as the standard medical textbook in Europe until the 17th century.⁴ In the third volume of the Canon of Medicine, Avicenna discussed the clinical manifestations and treatments of diseases associated with different organ systems in the human body separately. In the section "*bohūhat os-sawt/khoshūnat os-sawt*" (the chapter on lung and thoracic diseases), Avicenna detailed signs and symptoms of dysphonia/hoarseness similar to the clinical manifestations presented above.⁵ At the beginning of the chapter, Avicenna briefly explained the anatomical parts responsible for sound production in a clinically oriented manner. He then described clinical manifestations, basic mechanisms, etiological factors, and treatment strategies of diseases affecting the respiratory system and thorax. In detail,

Table 1: Lifestyle and dietary modifications for the management of dysphonia according to Avicenna's masterpiece "the Canon of Medicine"

Category	Recommendations
Lifestyle modifications	Avoid too salty, spicy, or sour foods
	Prevent vocal strain for singing and speaking
	Refrain from alcoholic beverages
	Gurgle grape juice with honey
	Bathe with moderately warm water
	Avoid prolonged exposure to extreme air temperatures
	Avoid lying awake at night
	Avoid overexertion
	Maintain a balance of body fluids, particularly in the summer
	Control anxiety and anger
Dietary modifications	Maintain healthy sexual activities
	Consume mashed raisins soaked in almond oil
	Drink warm milk
	Drink grape juice with honey
	Consume fresh violet essential oil with sugar
	Drink sweet pomegranate juice mixed with violet essential oil
	Drink non-alcoholic beer
	Eat soft boiled eggs without salt
Eat porridge with starch	

Table 2: Avicenna's recommended medicinal plants for the management of dysphonia

Family	Scientific name	Common name	Traditional name	Plant part
Leguminosae	<i>Vicia faba</i> L.	Broad beans	Baqella	Seeds
Pinaceae	<i>Pinus sylvestris</i> L.	Scotch pine	Habb ol-sanobar	Fruits (Pine nuts)
Vitaceae	<i>Vitis vinifera</i> L.	Raisins	Zabib	Dried fruits
Moraceae	<i>Ficus carica</i> L.	Common fig	Tin	Fruits
Leguminosae	<i>Trigonella foenum-graecum</i> L.	Fenugreek	Holbah	Leaves
Linaceae	<i>Linum usitatissimum</i> L.	Flax	Kattan	Seeds
Leguminosae	<i>Glycyrrhiza glabra</i> L.	Licorice	Sus	Root
Rosaceae	<i>Prunus dulcis</i> (Mill.) D.A.Webb	Almond	Lawz	Fruits
Poaceae	<i>Saccharum officinarum</i> L.	Sugarcane	Qasab os-sokkar	Brown sugar
Boraginaceae	<i>Cordia myxa</i> L.	Sebesten	Sapestan	Fruits
Arecaceae	<i>Phoenix dactylifera</i> L.	Date palm	Tamr	Fruits

he explained the signs, symptoms, and treatment of voice disorders, especially dysphonia. He described a hoarse voice as being similar to the sound of birds like “*Dorna*” (crane), which could be caused by dry dystemperament (DD).⁵ He described the underlying causes of a hoarse voice, including exposure to extreme air temperatures, lying awake at night for too long, consumption of certain foods (too salty, spicy, and sour), and vocal abuse, all of which can cause a dry throat. Additional factors include post-nasal drip or rhinorrhea, lung diseases, abnormalities in the structures of the throat near the vocal cords, etc.

Avicenna recommended certain lifestyle and dietary modifications to palliate, improve, and resolve dysphonia.⁵ Given the underlying causes, such as DD, recommendations in the Canon of Medicine are presented in table 1. In addition, recommended medicinal plants (individually or in combination) are presented in table 2.

In brief, we have presented Avicenna's viewpoints on dysphonia, due to DD, and his recommendations on lifestyle and dietary modifications, as well as the use of specific medicinal herbs. Some of these are still effective for the palliation of dysphonia and hoarseness. Further clinical studies are required to evaluate their effectiveness.

Authors' Contribution

M.S. contributes to the initial idea of the study and revised the final draft for important intellectual content; M.D. helped in the study design and collected the data and drafted the manuscript; A.B. and H.R.Kh. helped in the study design and collected the data and revised the final draft for important intellectual content; O.S. and R.S. was the main supervisor of this study and contributes to the initial idea of the study and revised the final draft for important intellectual content; All authors have read and approved the final manuscript and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Conflict of Interest: None declared.

Mostafa Solati^{1,2,3}, MD, PhD candidate;  Majid Dadmehr^{1,2}, MD, PhD; Abdolghader Bahraini⁴, MD, PhD; Reza Samarei⁵, MD; Hamid Reza Khalkhali⁶, PhD; Omid Sadeghpour^{2,7}, PharmD, PhD 

¹Department of Traditional Medicine, School of Persian Medicine, Iran University of Medical Sciences, Tehran, Iran;

²Research Institute for Islamic and Complementary Medicine, Iran University of Medical Sciences, Tehran, Iran;

³Student Research Committee, Iran University of Medical Sciences, Tehran, Iran;

⁴Department of Traditional Medicine, School of Medicine, Abadan University of Medical Sciences, Abadan, Iran;

⁵Department of Otorhinolaryngology, School of Medicine, Imam Khomeini Hospital, Urmia University of Medical Sciences, Urmia, Iran;

⁶Patient Safety Research Center, Department of Biostatistics and Epidemiology, School of Medicine, Urmia University of Medical Sciences, Urmia, Iran;

⁷Department of Traditional Pharmacy, School of Persian Medicine, Iran University of Medical Sciences, Tehran, Iran

Correspondence:

Omid Sadeghpour, PharmD, PhD;

Behesht St., Vahdat Islami St., School of Persian Medicine, Postal code: 11147-33311, Tehran, Iran

Tel: +98 21 55639667

Fax: +98 21 55613191

Email: sadeghpour.o@iums.ac.ir

Received: 18 September 2021

Revised: 13 December 2021

Accepted: 31 January 2022

Please cite this article as: Solati M, Dadmehr M, Bahraini A, Samarei R, Khalkhali HR, Sadeghpour O. Avicenna's Viewpoints on Dysphonia. *Iran J Med Sci.* 2022;47(3):285-287. doi: 10.30476/IJMS.2022.92775.2407.

References

- 1 Stachler RJ, Francis DO, Schwartz SR, Damask CC, Digoy GP, Krouse HJ, et al. Clinical Practice Guideline: Hoarseness (Dysphonia) (Update). *Otolaryngol Head Neck Surg.* 2018;158:S1-S42. doi: 10.1177/0194599817751030. PubMed PMID: 29494321.
- 2 Cohen SM, Elackattu A, Noordzij JP, Walsh MJ, Langmore SE. Palliative treatment of dysphonia and dysarthria. *Otolaryngol Clin North Am.* 2009;42:107-21. doi: 10.1016/j.otc.2008.09.010. PubMed PMID: 19134494.
- 3 Dadmehr M, Amini-Behbahani F, Eftekhar B, Minaei B, Bahrami M. Peritoneum as an origin of epilepsy from the viewpoint of Avicenna. *Neurol Sci.* 2018;39:1121-4. doi: 10.1007/s10072-018-3342-1. PubMed PMID: 29633058.
- 4 Bahrami M, Shokri S, Mastery Farahani R, Dadmehr M. A brief historical overview of the anatomy of fascia in medieval Persian medicine. *J Med Ethics Hist Med.* 2020;13:7. doi: 10.18502/jmehm.v13i7.4073. PubMed PMID: 33117500; PubMed Central PMCID: PMC7575910.
- 5 Ibn Sina AAH [Internet]. *Al-Qānūn fī al-Tibb.* [cited 03 August 2020]. Available from: <https://archive.org/details/AvicennasCanonOfMedicine/mode/2up>