



## Historical Issues of Optic neuritis and Sensory Disorder in Persian Traditional Medicine

*Mohsen PARVIZ<sup>1</sup>, Mohammad Ali SAHRAIAN<sup>2</sup>, Hossein REZAEIZADEH<sup>3</sup>*

1. Dept. of Physiology, School of Medicine, Tebran University of Medical Sciences, Tebran, Iran

2. Dept. of Internal Neurology, School of Medicine, Tebran University of Medical Sciences, Tebran, Iran

3. Persian Medicine and Pharmacy Research Center, Faculty of Traditional Medicine, Tebran University of Medical Sciences, Tebran Iran

\*Corresponding Author: Email: Rezaeizadeh@razi.tums.ac.ir

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### Dear Editor-in-Chief

Although there are no clinical findings that are exclusive to multiple sclerosis (MS), but some are highly specific of the disease. Optic neuritis (ON) and Sensory symptoms are common initial features of MS (1, 2). Optic neuritis is an inflammation of the optic nerve that usually first occurs in young and in many cases are associated with multiple sclerosis (MS), also can occur in isolation. In cases involving multiple sclerosis, ON is often the first exhibition of chronic demyelinating process so that 15 to 75% of female patients primarily presenting with ON eventually develop MS (3-7).

Optic neuritis usually presented as acute or sub-acute unilateral eye pain with a relative afferent pupillary defect (Marcus Gunn pupil) (8). Sensory symptoms are generally termed as numbness, tingling, pins-and-needles, tightness, coldness, or swelling of the limbs or trunk (1, 2).

The earliest references to eye diseases and optic nerve dysfunction as a mechanism for vision loss are found in some Persian Medicine texts by Avicenna, Gorgani and Rhazes according to himself and Galen, Hippocrates and others (9-11).

They described eye's disorders in perception, motion, and involving both and referred to inflammation of the optic nerve and various affections of the optic nerve, including those resulting from "warmth, cold, humidity, and dryness" (12) and the afferent pupillary defect. They explained

that we could detect pain and heaviness, "swelling" of the optic nerve.

All of them describe eye diseases in the special chapter of their textbooks or some physicians as Hunain Ibn Is-Haq and Ali Ibn Isa al-Kahhal in the major textbooks of ophthalmology (8).

### *New approach to sensory symptoms by Haly Abbas and Ibn Rushd*

Ali ibn al-Abbas ahwazi or al-Majusi (died 982-994), also known as Haly Abbas, was a Persian physician and psychologist. He is most famous for the Kitab al-Maliki or Complete Book of the Medical Art, his textbook on medicine and psychology, and for been a skilled clinician (13).

Another great philosopher and physician, Averroes, an Andalusian Muslim polymath commonly known as Ibn Rushd (1126 - 1198), wrote a medical encyclopedia called Kulliyat (in Latin: Colliget). He also made a compilation of the works of Galen, and wrote a commentary on the Canon of Medicine of Avicenna (14, 15).

Both of them in their books have the part of principles of evaluation and management of health and diseases. In the neurology, part of their books they have wrote sections about some neurologic disorders as other ancient traditional physicians as Greek, Islamic or Persian medicine.

But Haly Abbas and then Ibn Rushd was the first theorist that in the section of Sensory Disorders

begins a new chapter entitled diseases pertaining to sensation of touch.

In these chapters not only they have described some sensory symptoms exactly as are defined in modern medicine, but also fascinatingly, in this passage, they describe the inflammation and obstruction of the optic nerve, a condition which today we clearly refer to optic neuritis (16-17).

When Haly Abbas describe etiology of “Khadar” Equal to paresthesia and hypesthesia gives the examples of how the nerves damaged. He says some obstructive or inflammatory reasons that can result peripheral paresthesia, may causes optic neuritis in the central nervous system (16).

Here, Averroes further adds that if the etiological causes that can lead to symptoms as optic neuritis is strong enough, it can lead to paresthesia or hypesthesia on the trunk, in any of the limbs or on the whole body surface. Averroes emphasize sensory disorders are not only associated with brain, spinal cord and nerves but in addition are relative to heart function and balance of internal body dynamics (17). They did not talk more about ON and paresthesia anything else in the books and we do not know whether this is only an example or description of a disease or clinical observation To our research and knowledge, there has been no manuscript with referring to these two disorders, namely ON and sensory symptoms, in one chapter. In our view, we can say that Haly Abbas and Ibn Rushd are the first physicians who described ON and sensory disorders communicate with each other.

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## References

1. Fauci AS, Braunwald E, Kasper DL, Hauser SL, Longo DL, Jameson JL, Loscalzo J (2008).

- Harrison's principles of internal medicine*. 17<sup>th</sup> ed, (E book). McGraw-Hill Companies.
2. Polman CH, Reingold SC, Banwell B, Clanet M, Cohen JA, Filippi M, et al. (2011). Diagnostic criteria for multiple sclerosis: 2010 revisions to the McDonald criteria. *Ann Neurol*, 69: 292.
3. Shams PN, Plant GT (2009). Optic neuritis: a review. *Int MS J*, 16: 82–89.
4. Brodsky M, Nazarian S, Orengo-Nania S, Hutton GJ, Buckley EG, Massey EW, et al. (2008). Multiple sclerosis risk after optic neuritis: final optic neuritis treatment trial follow-up. *Arch Neurol*, 65 (6):727-32.
5. Feldon SE (2008). Optic neuritis and the risk of multiple sclerosis-what can we learn from a brain MRI scan? *Nat Clin Pract Neurol*, 4 (10).
6. Pirko I, Blauwet LK, Lesnick TG, Weinschenker BG (2004). The natural history of recurrent optic neuritis. *Arch Neurol*, 61:1401-1405.
7. Beck RW, Trobe JD, Moke PS, Gal RL, Xing D, Bhatti MT, et al. (2003). High- and low-risk profiles for the development of multiple sclerosis within 10 years after optic neuritis: experience of the optic neuritis treatment trial. *Arch Ophthalmol*, 121 (7): 944-9.
8. Volpe NJ (2001). Optic Neuritis: Historical Aspects. *J Neuroophthalmol*, 21(4): 302–309.
9. Ibn Sina A (1025). Shams-o-alidin E, editor (2005). *The Canon of medicine*, Alaalami Press. Lebanon. Vol 2: 211-351.
10. Gorgani SE (between 1111-1136). *Zakhibrye Khwarazmshahi*. Tadjbakhsh H, editor (2012). Amir Kabir Press. Tehran. 304-354.
11. Rhazes MZ (between 865 - 925). *The Large Comprehensive or Continens Liber*. Taeemi HK, editor. Dar ehya al-tourath al-arabi press. Lebanon. Vol 1: 27-180.
12. Rezaeizadeh H, Aalizadeh M, Naseri M, Shams Ardakani MR (2009). The traditional Iranian medicine point of view on health and disease. *Iranian J Publ Health*, 38, Suppl. 1: 169-172
13. [https://en.wikipedia.org/wiki/'Ali\\_ibn\\_alal-Majusi](https://en.wikipedia.org/wiki/'Ali_ibn_alal-Majusi).
14. <http://en.wikipedia.org/wiki/Averroes>
15. <http://www.britannica.com/EBchecked/topic/45>.
16. Ahwazi A (before 982). *Kitab al-Maliki or Complete Book of the Medical Art*. Research Institute for Islamic & Complementary Medicine of Tehran University (2008). Iran. Vol 2: 59-62 & 361-372.
17. Ibn Rushd (before 1198). *Kulliyat or Colliget*. Al-mazyidi AF, editor (2005). Dar al-kotob alilmiyah. Lebanon. 58-62 & 129-132.