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HISTORICAL OVERVIEW OF CERVICAL SPONDYLOSIS

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ABSTRACT

Degenerative disorder of some types at a certain point of life is a universal ageing phenomenon but with changing lifestyles, the number of population suffering with such an ailment is on rise. Cervical spondylosis is one of them. Pain is an unpleasant sensation, yet indispensable for life. It is derived from a Latin word 'poena' which means 'penalty' or 'punishment'. Pain is described as a multidimensional experience that is unique to each individual which can interfere with a person's physical, emotional, psychosocial and spiritual well-being. One such painful condition which significantly affects a person's quality of life is 'Cervical spondylosis'. The ancient medical experts including Hippocrates (460-377 BC) 'The father of Medicine' have discussed on cervical spondylosis in detail and treated it successfully. The present study is an attempt to reveal the historical aspects of cervical spondylosis.

Key words:

Cervical spondylosis, Hippocrates

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INTRODUCTION

Neck pain is one of the most frequent musculoskeletal cause of consultation in primary care worldwide. About two thirds of the population experience neck pain at some point in their life time. It is the product of a fast, mechanical life, which is full of tension, lack of exercises, bad posture, use of cushy pillows or also due to an injury and occupational factors. Cervical spondylosis undoubtedly contributes to this burden.^{1,2}

Cervical spondylosis is defined as arthrosis (degeneration) of the posterior intervertebral joints in the cervical vertebrae.³ It begins as a localised degenerative process in the central intervertebral joints subsequently affecting the posterior part. Then osteophyte formation occurs which causes narrowing of the intervertebral foramen resulting in nerve root irritation. In the later stage, generalized degeneration of the whole cervical spine occurs leading to severe neck pain, stiffness and disability to do routine activities^{3,4,5,6,7}

Cervical spondylosis is common in the middle aged and elderly. The overall incidence of cervical spondylosis varies from 5% to 10%. As per the estimates over half of the adults experience some degree of neck pain every year and 60-80% of older adults experience neck pain due to degenerative changes.^{3,8,9}

It is usually treated by the conventional therapists, either

pharmacologically or surgically or sometimes both. Pharmacological therapy includes oral or parenteral administration of non-steroidal anti-inflammatory drugs (NSAID's) and surgical interventions. Eminent medical personalities of the ancient era have given a detail discussion on cervical spondylosis including its treatment and management aspects which are given below.

Historical Aspects Of Cervical Spondylosis

"When in sickness look to the spine first"- **Hippocrates (460-377BC)**¹¹

- Paleopathologic examinations of skeletal remains from the ancient and medieval periods have revealed that the cervical degenerative process has not changed substantially over the last 1.5 millennia.¹¹
- The ancient medical text '**Edwin Smith Papyrus**' (1550 BC) consists of approximately 48 cases, three of which directly deal with the cervical spine. The case descriptions show a good knowledge of the anatomy and pathology as well as the ability to differentiate between upper and lower cervical spine pathology.¹⁰
- The ancient Egyptians were familiar with certain functions of the spinal cord. They performed cervical laminectomy as a routine part of mummification but never as a form of treatment for acute or chronic injuries.^{10,12}

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- At the time of **Herophilus of Chalcedon (4th century BC)** the origin of nerves was traced to the spine.¹¹
- **The Byzantine physician, Paul of Aegina**, understood the pathoanatomy enough to recommend cervical decompression via laminectomy in the setting of cord compression, but limitations in operative techniques, as well as surgical technology, prevented wide spread application of this maxim until the modern period.^{10,13}
- **Plato (427-347 BC)**, who influenced the disciplines of philosophy, psychology, logic, and politics, through his conceptualization that mathematics is the life force of science, implicated biomechanics in function of the spine.¹⁴
- **Hippocrates (460-377 BC)** in his book, 'On The Articulations', was generally very pessimistic about the treatment of cervical spine pathology but was well aware of the high association between intracranial trauma and concomitant spinal cord injury. He was also called as 'Father of spine surgery'. Cervical traction performed with simple slings and bandages was well recognized by Hippocrates and his peers. Hippocrates considered knowledge of the spinal anatomy essential to physicians: "One should first get knowledge of the structure of the spine; for this is also requisite for many diseases".^{10,14}

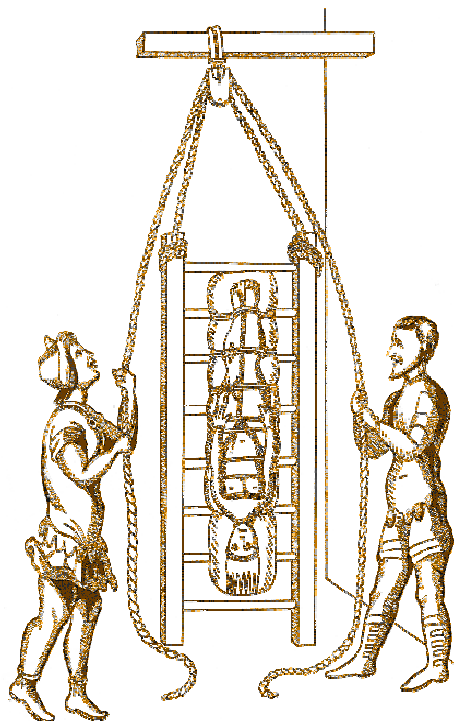


Figure 1 Hippocratic Traction

- **Aristotle (384-322 BC)** described the action of the cervical muscles and subjected them to geometric analysis for the first time.¹⁴
- **Galen of Pergamon (130–200 AD)**, an eminent Greek physician, is a pioneer of spine research who studied anatomy of spine in detail and wrote about spinal deformities in his book.¹⁴
- **Avicenna (980-1037 AD)**, an intellectual prodigy has discussed about this ailment in his world famous book 'Al-Qanoon fit Tib- The Canon of Medicine'.¹⁵

- **Vesalius (1514-1564)** was the first to give the anatomical description of the intervertebral disc. Its discovery paved the way for scientific endeavors surrounding cervical spine pathology.¹⁰
- **Fabricus Hildanus (1646)** described his attempts at reducing fracture dislocations of the cervical spine with a special clamp he devised which allowed for the manipulation of the spinous processes and the soft tissue.^{10,16}
- **James Parkinson (1817)** developed his interest in disorders of the cervical spine after reviewing many cases of spondylosis and attributing parkinsonism to "diseased state of medulla spinalis in that part which is contained in the spinal canal". He recognized the great degree of mobility of the cervical spine and opined that the cervical spine is liable to injury from sudden distortions. His treatment for cervical root compression was as follows: "Blood was taken from the back part of the neck by cupping. Hot fomentation was applied for about an hour when the upper part of the back of the neck was covered with a blister. On the following day the pain was significantly reduced and in the course of four to five days the patient was relieved of pain".^{10,17}
- **Monro and Portal (1771)** both knew of the function of the intervertebral disc and its role in the aging spine.¹⁰
- **Victor Horsley (1892)** in London performed a laminectomy of the 6th cervical vertebra on a 20-year old labourer.¹⁰
- It was not until the 19th century that the associations were made between degenerative changes in the cervical spine and neurologic symptoms in the arms or legs.^{10,11}
- **Stookey (1928)** first reported cervical cord and nerve root compression from the presence of 'soft' and 'hard' disc herniations. He would subsequently follow this landmark article with another that highlighted three different clinical syndromes resultant from cervical disc herniations.^{10,11}
- By the mid-1940's, a more modern understanding of spectrum of cervical degenerative disorders, and their disparate etiologies had been attained.^{10,11}
- **The work of Brain (1947)** differentiated the symptoms encountered in acute disc herniations from those found in spondylotic radiculopathy. Brain *et al.* also first presented the concept of cervical spondylotic myelopathy in a series of 45 patients in 1952.¹⁰
- The pathophysiology and eitiology of cervical degeneration was further defined by Freidenberg *et al.*¹⁰
- The work of Clark and Robinson contributed to a more thorough understanding of the underlying pathology responsible for spondylotic myelopathy.^{10,11}
- **Mixter and Barr (1934)** described the first successful surgical interventions for relief of symptoms caused by degenerative diseases.¹⁰
- As the understanding of cervical anatomy continued to advance, however, anterior approaches for decompression and fusion in the cervical spine were described by several investigators. With the advent of cervical laminoplasty techniques in the early 1980's and total disc arthroplasty in the late 1990's, the current armamentarium of surgical intervention for the treatment of cervical spondylosis was completed.^{10,11}

References

1. Goldman L., Ausiello D., Cecil Medicine, Vol. 2., Elsevier, New Delhi, 23rd Edition, pp.2652, 2658
2. Modi K.M., Cure Aches and Pains through Osteopathy, India Book House, Bombay, 1984, pp.82,83
3. Mayilvahanan N., Natarajan's Textbook of Orthopaedics and Traumatology, AIPD Publishers, New Delhi, pp.119
4. Joshi J., Kotwal P., Essentials of Orthopaedics and Applied Physiotherapy, Elsevier, New Delhi, pp.392
5. Nicholas A., Nicki R., Brian R. Walker, Davidson's Principles & Practice of Medicine, Churchill Livingstone Elsevier, 20th Edition, 2006, pp.1241
6. Golwalla A.F., Medicine for Students, The National Book Depot, Mumbai, 22nd Edition, Mumbai, pp.592
7. Ernst Schneider, Healthy by Nature, Vol.2, Ibergraphi, Spain, pp.249
8. Quamri M.A., Baig M.G., 'A Randomized Open Labeled Comparative Clinical Study On The Efficacies Of Hijamat Bila Shurt And Habbe Gule Aakh In Cervical Spondylosis', International Journal Of Current Research and Review, Vol.7, Iss. 2, 2015, pp.41,42,43
9. Aleemuddin Q., Mirza Ghufuran B., Effect of Dalak Layyin with Roghan-e-Gule Aakh in cervical spondylosis- A pre and post analysis clinical study, International Research Journal of Medical Sciences, Vol. 3(1), 2015, pp.5-8
10. Ramani P.S., Textbook of Cervical Spondylosis, Jaypee Publishers, New Delhi, 1st Edition, 2004, pp.3-15
11. Benzel Edward C., The Cervical Spine, Lippincott Williams & Wilkins, 2012, pp.885
12. Sabiston D.C., Textbook of Surgery, WB Saunders Co., Philadelphia, 1981, pp.1,2,5
13. Brain L., Wilkinson M., Cervical Spondylosis and other Disorders of Cervical Spine, WB Saunders Co., Philadelphia, 1967, pp.1-9
14. Vasiliadis E.S., Historical Overview of Spinal Deformities in Ancient Greece, Scoliosis, 2009, 4:9
15. Ibn Sina, Al-Qanoon fit Tibb, Vol 3, Urdu translation by GH Kantoori, Idara Kitabus Shifa, New Delhi, pp.1119,1120,1121,143,146
16. Hildanus F., A History of Neurological Surgery, Hatner Publishing Co., New York, 1972, pp.66
17. Stookey B., Compression of the Spinal Cord due to Ventral Extradural Cervical Chondromas, Arch Neur Psych, 1927, 20(1), pp.275-291
18. Clark E., Robinson P.K., Cervical Myelopathy: A complication of Cervical spondylosis, Brain, 1956, 79(1), pp.483-509
19. Brain W.R., Northfield D., The Neurological Manifestations of Cervical Spondylosis, Brain, 1952, 75(1), pp.187-225
20. Mixter W.J., Ayer J.B., Herniation or rupture of the intervertebral disc into the spinal canal, NEJM, 1935, 213(1), pp.385-394

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