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TEXT NECK SYNDROME AND ITS PERSPECTIVE THROUGH AYURVEDA: A LITERARY REVIEW

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ABSTRACT

Text neck syndrome, increasingly prevalent among the young due to prolonged use of handheld devices like Mobile Phones and Tablets, involves forward head flexion and is marked by symptoms such as neck pain, stiffness, and reduced mobility. Untreated, it can lead to spinal curvature issues, early arthritis, disc compression, and nerve and muscle injuries. Ayurvedic texts liken it to Manyastambha (stiffness of neck), characterized by similar neck symptoms. Prevention is emphasized, with Ayurvedic management including avoiding causative factors, Abhyanga, RukshaSwedana, Nasya, GreevaBasti, internal medicines, and specific Yoga practices. These holistic approaches aim to alleviate symptoms and prevent complications, offering an alternative to conventional treatments. The objective of this study is to collect relevant information regarding the aetiology, pathophysiology, and treatment modalities of 'text neck syndrome.' And to co-relate and quote information regarding Manyastambha from Ayurvedic Samhitas. Thorough analysis of Samhita commentaries and published articles. This research provides a thorough literature review of 'text neck syndrome' along with its correlation with 'Manyastambha'; its diagnostic and therapeutic measures. This can benefit many aspects in terms of reviewing, treating, and preventing this syndrome.

Keywords: mobile phone syndrome, text neck syndrome, Manyastambha, Nanatmajavyadhee, Panchakarma, Yogasana

INTRODUCTION

The 21st century is dominated by technological advances in many aspects, as technological intervention is increased in daily-household work. These technological advances are also changing our mode of communication 360°. We shift from letters to email, SMS to long chatting on the social media platform, cash payments to electronic transactions, etc. This shows how much we are immersed in screen time. In these modern times, mobile has become the basic would like the human population. These days individuals of all ages and every one of the sections uses mobile, mostly our young generation. The number of smartphone users in the Republic of India was calculated to achieve over 760 million in 2021¹. Despite spending hours each day slumped over handheld gadgets with their heads stretched forward, 75% of the world's population is always in danger and at risk of acquiring Text Neck. Frequent forward flexion alters the bone segments, ligaments, tendons, muscles, and curve of the cervical spine, which frequently results in postural alteration. The main symptoms of Text Neck are pain in the neck, shoulder, back, arm, fingers, hands, wrists, and elbows. Other common complaints include headaches, numbness, and tingling in the upper extremities. The flattening of the spinal curve, disc herniation, muscle injury, onset of early arthritis, spinal misalignment, disc compression, loss of lung volume capacity, and nerve damage are just a few of the serious, long-lasting effects of Text Neck if left untreated.

In a survey of 547 male undergraduate health services students, it was discovered that 23% of the participants were classified as nomophobic (a psychological condition when people have a fear of being detached from mobile phone connectivity) whereas 64% of the participants were at danger of becoming so.² Over 35 times a day, over 77% of students check their phones.² Nowadays, texting has become a common means of communication. Most individuals pay their time by texting, watching videos, and doing different work on mobile phones. Excessive use of mobile phones produces ill effects on our health. This principally affects our neck and has Text neck syndrome, an associated degree rising disease of today's world. The term 'text neck' describes the neck pain and injury sustained from looking down at mobile, pill, or different wireless electronic devices too often and for too long³.

Ewa Gustafsson et al. published a cohort study on texting on mobile and the increase in musculoskeletal disorders in young adults⁴. Text neck syndrome is often correlated with Manyastambha thanks to the similarity in symptoms like pain and stiffness within the neck. Manyastambha is one of the VatajNanatmajaVyadhee(diseases due only to vitiated)described in Charak Samhita⁵. As this condition comes under VatajNanatmajadisease same pathological event is recognized, i.e The disease will occur where there is Khavaigunya(weakening or deformity of the empty space)⁶. The treatment for these Vata diseases are explained under the terminology of 'Vatasamanyachikitsa upakrama'⁷ (modalities used in vitiated of Vata humor) from this, the suitable Panchakarma procedure, internal medicine, and external treatment modalities are selected for a particular patient. Its line of treatment is Nidanaparivarjana (avoidance of etiological factors), Shodhanachikitsa (Purification therapy), and Shamanachikitsa (Palliative therapy). In conjunction with these Yoga conjointly play vital roles in managing this illness.

METHODOLOGY

This review article is a compilation of information regarding 'text neck syndrome' and 'Manyastambha' collected from Ayurveda text and various published reports. Different Ayurvedic texts, printed analysis papers, and offered materials on the internet are reviewed for this article.

Text neck syndrome:

The term 'Text Neck' was coined by U.S. chiropractor Dr. Dean L. Fishman. It is also called 'Tech Neck' or 'Turtle Neck Posture' 'Anterior Head Posture.' Text Neck is used to define repetitive stress injury or an overuse syndrome due to forward head flexion and bending down to look at the device held in hand (mobile, tablet, or any wireless electronic device)⁸. Recent data shows that this 'text neck syndrome' is emerging 21st century syndrome⁹. This syndrome occurs due to excessive stress on the cervical structure due to prolonged forward flexion of the head. Majority of the world's population spends hours daily bowing over their device, which they hold with their hand flexed forward and stuck in that position for an extended period. When it becomes habitual, it becomes prone to develop Text Neck syndrome. Prolonged forward flexion of the head changes the cervical spine curve. Many studies show that this syndrome is present in adults and exacerbated in children and adolescents which is increasing.¹⁰ Thus, it is essential to understand its pathophysiology and etiological factors thoroughly. It will help in primary Prevention and better Management of this disease.

Table 1. showing force on the neck while forward flexion of the head at different degrees. ^{11, 12}

Sr. No.	The angle of the neck incline	Force exerts on the neck
01.	0°	4.54 - 5.44 kg (10-12 lbs)
02.	15°	12.25 kg (27 lbs)
03.	30°	18.14 kg (40 lbs)
04.	45°	22.23 kg (49 lbs)
05.	60°	27.22 kg (60 lbs)

Symptoms in text neck syndrome ¹³

Following is a group of symptoms for text neck syndrome.

1. Pain in the neck, upper back, and shoulder; it may start from any point in the neck and can radiate to the upper back and shoulder.
2. Neck stiffness due to the prolonged forward neck bending
3. Reduced mobility of the neck due to muscle stiffness.
4. Headache, because there may be pain at the base of the neck, and from there, it will radiate to the head, and a person can feel a headache.
5. Normal body posture is disturbed to Forward head posture and rounded shoulder.
6. Due to strain, numbness over the neck, upper back, and shoulder may be seen.
7. Sometimes, the tingling sensation of the upper extremity is seen.
8. Muscle weakness, especially in the trapezius, scalene muscle, rhomboid, and sternocleidomastoid muscle.

Complications observed in Text neck syndrome ¹⁵

1. Compression of spinal nerves
2. Early arthritis
3. False alignment of the spine
4. Degeneration of the spine
5. Disc bulging
6. Disc herniation
7. Damage to nerve and muscle
8. Decreased lung capacity volume

Preventive measures for text neck syndrome ¹⁶

1. Raise the mobile or different devices to eye level while texting or reading to avoid forward neck bending.
2. Avoid Excess usage of handheld gadgets.
3. Take a break and stretch the neck frequently while using handheld devices.
4. Avoid forward bending posture for a long time.
5. Exercise daily to keep neck muscles healthy, strong and flexible

Management of Text Neck Syndrome ^{17,18}

Management of the syndrome is different according to its chronicity as follow:

A. Acute condition

1. Exercise neck every 30-40 min while using handheld devices and revise it ten times.
2. Stretch the muscle by rotating your head and holding the position for at least 10 to 20 seconds.
3. Chin tuck exercise; repeat it ten times.
4. Apply heat packs.
5. Massage the neck. It relieves muscle tension and spasm.
6. For pain management, use analgesics with caution.

B. Chronic condition

1. Physical therapy
2. Analgesics for pain with caution

3. Cervical epidural steroid injection
4. Cervical facet injections
5. Trigger point injection

Text neck syndrome through Ayurveda perspective

It is tough to correlate text neck syndrome specifically with diseases mentioned in Ayurvedic texts, but it can be sheltered under VataVyadhi Stambha. i.e rigidity or obstruction in the body occurs due to the cold property of Vata Dosha of Stambha. Hima (stiffness due to cold character). It is described as a symptom of Vata aggravation by Vagbhatacharya. Charakacharya describes it as one of the eighty Vatajananatmajavyadhi¹⁹. While describing VataVyadhi, Pathogenesis- due to the causative factors the vitiated Vata will dominate and produce different symptoms as described earlier²⁰. It occurs in Urdhwajathru Pradesha (area above the clavicle bone i.e. head and neck). The term 'Manyastambha' is created from 2 words, 'Manya' and 'Stambha.' The word 'Manya' means 'back or nuchal of the neck,' and also, the word 'Stambha' suggests stiffness or rigidity thus Manyastambha could be a syndrome of the neck becoming stiff or rigid. There are resultant impaired movements of the neck. Consistent with Acharya Caraka, injury to the pinnacle offers rising of Manyastambha²¹. Acharya Vagbhata has mentioned it as a symbol of Antaraya (obstacle)²². As per Acharya Sushruta – sleeping throughout the day, improper means of sitting, standing, and gazing upwards or down for prolonged periods cause aggravation of Vata. This aggravated Vata gets Aavrita (enveloped or impeded) by Kapha. Kapha Avarana (one which causes Avarana) in turn causes rigidity of Sira (nerves) situated in the back of neck and produces Manyastambh.²³ The Sampraptighataka (components involved in etiopathology) of Manyastambha^{24,25} is explained in table 2 below.

Table 2: The Samprapti Ghataka (etiopathogenesis) of Manyastambha (ayurveda aspects of text neck syndrome)

Sr. No.	Title	Description
	Dosha	Vata Pradhan Kapha Dosha
	Dushya -	Dhatu - Mamsa, Meda, Asthi; Upadhatu - Sira, Snayu, Kandara
	Agni -	Vishamagni
	Srotas-	Mamsavaha, Asthivaha
	Srotas dushti	- Sanga, Vimargagamana
	Adhishthan-	Manya
	Rogamarga	Madhyama

These are some standard features of Manyastambha, commonly observed in patient such as stiffness, stretching, and pain in the neck region with limited neck movement.²⁶

The pathological consequences and related clinical manifestations of disease mentioned below²⁷

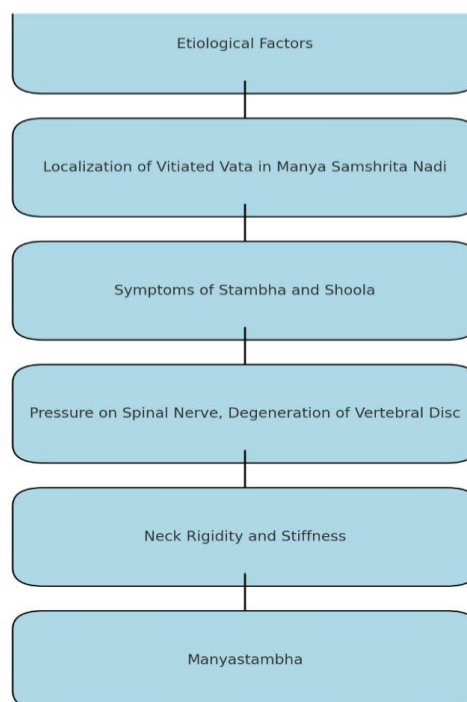


Figure 2: figure shows pathological consequences in Manyastambha

Manyastambha in the context of various diseases throughout Samhitas

Manyastambha is described as a Vata 'Nanatmajavyadhi' in CharakaSamhita, also there are other diseases and conditions in Samhitas, which consists of Manyastambhaas a symptom.

Manyastambha is explained as one of the symptoms of "Kshavathu Veg Dharana," i.e., unnatural holding of sneezing²⁷. This is also mentioned as one of the symptoms in Antarayam (internal bending of body)²⁸. Chakrapani Acharaya describes it as a premonitory syndrome of Antarayam. While Chakradatta gives commentary as Manyastambha and Antaryama are the same condition. Also, the term 'Greevahundanam' (tremor of neck) mentioned as VataVyadheechikitsa under Vata-Kupita Lakshana (sign and symptoms); this Greevahundanam is also considered a synonym for Greevastambha according to Chakrapani²⁹. Manyastambha, is also termed as an associated symptom in Bahirayama³⁰.

Ayurvedic Management of Manyastambha vis-a-vis (Text Neck Syndrome)

CharakaSamhita Chikitsa Sthana has one dedicated chapter for treatment modalities in various Vata-dominant disorders under the title 'VataVyadheechikitsa Adhyaya.' In this chapter, there are different treatment protocols explained according to conditions. Many procedures like Mrudushodhana (mild detoxification therapy), Snehana (oleation), Swedana (sudation), Nasya, Basti (Enema), Dhoompana (medicated smoking), internal use of medicated Ghee, diet enrichment of Madhura (sweet), Amla (Sour), and Lavan (Salty) tastes are mentioned under 'Samanya VataVyadhi Chikitsa Upakrama'^{31,32,33,34}. In addition, one treatment principle quoted in the same chapter states, to use various treatment modalities according to vitiated Dosha, Dushya, and place of symptom manifestation.³⁵ These treatment modalities can be used in 'Text Neck syndrome' as per Ayurveda principles. Following are treatment that are mentioned in the various Ayurvedic texts:³⁶

1. Nidan Parivarjana (Avoid the etiological factor)
2. Abhyanga with Saindhavadi Taila or Vishgarbha Taila etc.
3. Ruksha-sweda e.g. Valukasweda (sudation by sand) etc.
4. Nasya karma by Kataphala (Myricanagi) etc.
5. Manya Basti by Saindhavadi Taila or Vishgarbha Taila etc.
6. In a disease condition, if Vayu is obstructed by Kapha, then, in such a type of condition, Tikshna Sweda, Niruha Basti, Vamana (medicated vomiting), and Virechana (medicated purgation) are given. Puraana Ghrita (1 Year priorly prepared), sesame oil, and mustard oil are beneficial.³⁷

As per Bhavprakas³⁸

1. Neck massage is to be done with Ghrita or Taila. Then the area is covered with Arka Patra (*Calotropis gigantea* leaves) or Eranda Patra (*Ricinus communis* leaves), and hot fomentation is given continuously.
2. Kukkutanda Drava (egg shell of hen) is heated with Saindhavalavana and Ghrita and applied over the neck.

Shamanaushadhi (general medication) for manyastambha ^{-39,40}

Following is the various medicinal drugs used in Manyastambha in table 3.

Table 3. Shaman Medicine on Manyastambha (Text Neck Syndrome)

Sr. no.	Form	Medicines	Dosage	Anupana
1.	Rasa / Bhasma	Vatagajankush rasa, Vatachintamani rasa, Godantibhasma.	125-250 mg B.D.	Lukewarm water
2.	Guggulu	Mahayograjguggulu, Trayodashangaguggulu, Simhanadguggulu etc.	500mg - 1gm B.D.	Lukewarm water
3.	Vati (tablet)	Vishtindukvati, Agnitundivati etc.	125-250 mg B.D.	Lukewarm water
4.	Kwatha (decoction)	Panchmoolkwatha, Dashmoolkwatha, Maharasnadikwatha, etc.	20 - 40 ml BD	With an equal quantity of water
5.	Churma (powder)	Sunthichurna, Panchakolachurna, Ashwagandhachurna, etc.	3 - 6 gm B.D.	Lukewarm water
6.	Asava / Arishta (syrup)	Dashmularishta, Balarishta, Draksharishta, etc.	15- 30 ml BD	With an equal quantity of water

Yoga - asana ⁻⁴¹

It will help to relax the muscle by minimizing pain and associated complaints. Some yoga asanas which are beneficial for this condition are -

1. Bhujangasana
2. Ardhamatsyendrasana
3. Ardhaushtrasana
4. Marjariasana

Pathya - Apathya - (Do's and don't's) ⁴²

Pathyaahara (what to eat)-	Godhuma (wheat), Shali rice (type of rice), Kulatha (<i>Macrotyloma uniflorum</i>), Masha, (<i>Vigna mungo</i>) Patol (<i>Trichosanthes dioica</i>), Shigru (<i>Moringa oleifera</i> Lam), Lashuna (<i>Allium sativum</i>), Dasdima (<i>Punicagranatum</i> Linn.), Draksha (<i>Punicagranatum</i> Linn.), Ghrita, Jangalamamsa (meat of dry land animals), etc.
Apathyaahara (what not to eat)	Honey, Shushkamamsa (dry or roasted meat), Udumbara (<i>Ficus racemosa</i>), Kamala Nala (<i>Nelumbonucifera</i>), Jambu (<i>Syzygium cumini</i>), Mudaga (<i>Phaseolus radiatus</i> Linn.), Pea (<i>Pisum sativum</i>) etc.
Pathyavihar (what to do)	Abhyanga, Aushadhasevana (taking medicine), Rukshasweda (dry fomentation), Basti (enema), Mardana (massage) etc.
Apathyavihar (what not to do)	Anashana (fasting), Chinta (worry), Ratrijagarana (waking up at night), Vegavidharana (stopping natural urges), Shrama (hard work) etc.

DISCUSSION

A worldwide epidemic known as "text neck" is a widespread health issue affecting millions of people of all ages and socioeconomic backgrounds. Text neck is a detrimental and potentially deadly physical condition caused by the widespread misuse of handheld mobile technology. Dr. Fishman coined the term "text neck" to describe the recurrent stress injury to the body resulting from excessive texting and overusing all portable electronic devices. The phrase and

the condition stem from cervical spinal degeneration that occurs when people frequently stretch their heads forward while looking down at their phones and texting for extended periods. Although "text neck" is a relatively new medical term, the condition already affects millions of people and is becoming a serious global concern. Text neck is not just the result of excessive cell phone use and texting; people of all ages slouch over various mobile devices for endless hours every day. Mobile technology caters to almost every application, including tablets, PDAs, MP3 players, video game consoles, e-readers, media players, digital cameras, and video recorders.

Text Neck syndrome can appear as an acute or chronic condition associated with neck structural and functional deformity, stiffness, and restricted neck movements. This condition is commonly observed in people with a significant history of excessive electronic gadget use. It occurs due to the forward bending of the neck while using handheld devices for prolonged periods. There is collected information regarding Text Neck syndrome, its symptoms in acute and chronic phases, treatment modalities, and preventive measures. One should follow all the preventive measures outlined to avoid this syndrome. Prevention is key when it comes to Text Neck. The following recommendations are based on a systematic review⁴³:

- Position the device ergonomically.
- Avoid prolonged one-handed holding.
- Limit excessive usage with frequent breaks.
- Minimize repetitive movements.
- Avoid prolonged static postures.

These steps can help reduce stress on the head/neck, upper extremities, and overall strain. It has been discovered that rehabilitation is a very efficient method of addressing the stress injury brought on by text neck. A 2–4-week rehabilitation program could start with soft tissue mobilization, Grade 1 and 2 joint mobilizations, and active and passive stretches for tight muscles. It then moves on to muscle strengthening, posture correction, and home exercise regimens.⁴⁴The primary objective in acute instances is to relieve discomfort. This can be achieved through:⁴⁵

- Massage
- Exercises to tighten the chin
- Regular neck rotations
- Side bending
- Ice/heat packs
- Regaining use of the serratus and upper trapezius

In extreme chronic cases injection into the facet joint or trigger point or acupuncture can be done for pain management.⁴⁶Management aims to combat this syndrome by prioritizing the restriction of causative factors as a central focus of treatment. At first, the patient should follow the Nidanaparivarjana meaning he should avoid prolonged use of handheld devices. Some of the Lakshanas of Kupitoanilah (Vayu) are similar to the signs and symptoms of Greevastambha like "Pani-Prishtha-Shirograha" (stiffness of shoulders, back and head), Gatrasuptata (numbness of that area), Greevayahundanam (neck stiffness)". Snehana and Swedana have been advocated for Vata vyadhis with Snehana and Swedana. The results of Snehana (internal / external) and Swedana (Saagni/Anagni) nourishes Dhatus (body tissues), increases Agni, Bala (digestion) and increase strength of body. Study conducted by Dr. A. Jayashree Prasad's stated that Agnikarma's effectiveness was found to be marginally superior to YograjGugulu's as an internal medication in terms of managing acute pain.⁴⁷This measure is valid for Text Neck Syndrome condition as it helps to get rid of stiffness and scale back pain.⁴⁸

As the affected site is above the clavicle, this text neck syndrome (Manyastambha) comes under Urdhwajatrugataroga. Nasya is one of the effective panchakarma procedures used in most disease conditions in Urdhwajatrugata. Charakacharya has described Manyastambha in NasyaArha (indications)⁵⁹. It helps to get rid of aggravated Doshas and relieves symptoms of this syndrome. Acharya Charakhas explained Manyastambhas Vataja Nanatmaja Vikarain Sutrasthana.⁵⁰As Vayu is responsible for all the activities in the body and hence it is an active principle of the body but pathology is generated in its VikritAwastha⁵¹Acharya Sushrutahas also described in ChikitsaSthana and Nidanasthana⁵². The Nidana of Manyastambha are Diwaswapna (Due to day time sleeping), Upaveshanam (wrong sleeping area), Urdhwaneerikshna (watching downwards and upwards for the long time) causing over stretching of cervical area resulting into TridoshaPrakopa (vitiated of 3 dosha). The imbalanced doshas obstructs the passage of Vata leading to Ruka (pain), Toda, Stambha (stiffness with restricted movements) in Manya Pradesh (Neck region).⁵³On the other hand, Shamanaaushadhi causes pacification of aggravated Doshas. If aggravated Vayu and Kapha pacified, then mechanically, its symptoms also are reduced. Text neck syndrome happens as a result of repetitive stress over the neck. So, proper practice of Yoga-asana⁵⁴ helps to get rid of this stress over the neck and reduce the symptoms of this syndrome.

CONCLUSION

Text neck syndrome is increasingly prevalent due to electronic gadgets like Mobile Phones, Tablets, and Computers, especially among young adults who often hunch over their phones. This habit adversely affects their health, necessitating avoidance of prolonged mobile phone use. Ayurvedic perspective identifies SleshmakaKapha and Vyana Vata as involved Doshas. MargavrodhjanyaVataPrakopa leads to Kshaya (degeneration) of Snayu and Asthi, causing physical alterations in the cervical region. Treatment typically includes Snehan and Swedana for VataVyadhi, with Nasya, RukshaSwedana, Abhyanga, and Lepa offering promising results compared to conventional management.

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