

BASTI IN BACK PAIN

Submitted by
Dr Divya Jyoti

Under the supervision of
Dr Vikas Gupta

A Dissertation Submitted to NIHSR
In partial fulfillment of the requirements for the Degree of
Doctor of Medicine in Naturopathy

Abstract

Back pain is a leading cause of disability. It occurs in similar proportions in all cultures, interferes with quality of life and work performance, and is the most common reason for medical consultations. Few cases of back pain are due to specific causes; most cases are non-specific. Acute back pain is the most common presentation and is usually self-limiting, lasting less than three months regardless of treatment. Chronic back pain is a more difficult problem, which often has strong psychological overlay; work dissatisfaction, boredom, and a generous compensation system contribute to it. Among the diagnoses offered for chronic pain is fibromyalgia, an urban condition (the diagnosis is not made in rural settings) that does not differ materially from other instances of widespread chronic pain. Although disc protrusions detected on X-ray are often blamed, they rarely are responsible for the pain, and surgery is seldom successful at alleviating it. No single treatment is superior to others; patients prefer manipulative therapy, but studies have not demonstrated that it has any superiority over others. There is a need of common outcome measures to judge the efficacy of treatments for studies and hence there is an utmost requirement of synergy of various medicine systems and methods into today's fast paced medical requirements, to get optimum outcome. Worldwide acceptance and demand for Ayurveda and naturopathy along with modern science is on the rise. To keep up with ever changing medical science stream, old concepts of Ayurveda, Naturopathy need to be analysed and updated in relevance with developments in contemporary science in reference with Back Pain. In Ayurveda treatments, panchakarma plays a vital role and in Panchakarma, Basti treatment is one of the important components. Hence, Basti karma is the most important and powerful treatment or procedure among all the five processes. In Naturopathy, the recuperative and healing properties of hydrotherapy are based on its mechanical and/or thermal effects and apt for enema.

It exploits the body's reaction to hot and cold stimuli, to the protracted application of heat, to pressure exerted by the water and to the sensation it gives. In modern medical science, the principal medical usages of enemas are a: Bowel cleansing, b: Acute treatments.

Table of Contents

Chapter 1: Introduction to the Study

Chapter 2 : Literature Review

Chapter 3 : Procedure of Basti

Chapter 4 : Comparative study among patients

Chapter 5 : Conclusion

References

Chapter 1

Introduction

The human back is composed of a complex structure of muscles, ligaments, tendons, disks, and bones, which work together to support the body and enable us to move around. The segments of the spine are cushioned with cartilage-like pads called disks. Problems with any of these components can lead to back pain. In some cases of back pain, its cause remains unclear. Damage can result from strain, medical conditions, and poor posture, among others.

BASTNAADEEYATE ETI BASTI.(A.H.Su.19-1)

BASTIBHIRDEEYATE YASMAAT BASTIRITOSMRUTAH.(Su.u.Khand 5/1)

Basti Karma is one of the main procedures of Panchakarma Chikitsa. Various medicated enemas are introduced into the large intestine through the rectum with the help of an enema pot or special bag made for this purpose. "Basti" literally means the urinary bladder. In ancient times, sterilized urinary bladders of animals was used to instill the enema, hence the name of the procedure is Basti Karma. The extent of Ayurvedic Basti is very significant and hence cannot be compared with contemporary enema, which is used for bowel cleansing or nutritive therapies. As per Ayurveda, treatment of VataDosha is mandatory in treating any disease, since Vata Dosha is known to be the main cause in initiating ailments. Basti chikitsa is the most important treatment to subdue the elevated VataDosha, hence it is considered as most important procedure in Panchakarma Chikitsa. If administered properly this therapy can cure most health complaints and promote good health. Basti is mainly of two types. 1) Anuvasan Basti – Mainly contains only sesame or medicated oils. This is usually given in small amount like 60 to 100 ml 2) Asthapan or Niruha Basti – It contains other material in addition to oil like decoction, herbal paste, honey, etc.

In Naturopathy, Hydrotherapy is a branch of Nature Cure. It is the treatment of disorders using different forms of water. These forms of water application are in practice since age-old days. Hydrothermal therapy additionally uses its temperature effects, as in hot & cold baths, saunas, wraps, etc and in all its forms-solid, fluid, vapour, ice and steam, internally and externally. Water

is without doubt the most ancient of all remedial agents for disease. This great healing agent has now been systematized and made into a science. Hydriatic applications are generally given in different temperatures.

In modern medical science, the principal medical usages of enemas are a: Bowel cleansing, b: Acute treatments. As bowel stimulants, enemas are employed for the same purposes as orally administered laxatives: To relieve constipation; To treat fecal impaction; To empty the colon prior to a medical procedure such as a colonoscopy.

Chapter 2

Literature Review

The word 'Basti' or 'Vasti' literally means bladder. In ancient times, bladders of animals were used to conduct this procedure. Hence, the procedure is named as Basti karma. Basti karma simply means medicated enema. In this process medicated decoctions and oils are administered in the body through anus with the help of instrument specially made for Basti process.

Basti is said as half of the treatment of Ayurveda (Charak Samhita Siddhi Sthana 1/39). Basti is not only cleansing process as Vaman and Virechan, it also performs various types of functions according to the type of Basti implemented e.g. Shodhan Basti acts as a cleansing process; Bruhan Basti is nutritive in function. Acharya Charaka gives detailed description about in Siddhi Sthana. He mentions about 216 yogas of which 29 are original Yogas and the remaining 187 are extended yogas. Among the 29 original yogas, 3 yogas for Anuvasana are also mentioned (SatvaryadiAnuvasana, BaladyaAnuvasanam, SahacaradyaAnuvasanam). It is supposed to be the best treatment for most of the VataVyadhi as quoted by Maharshi Charaka that "Basti Vataharanam Shreshtham" and also claimed as the main radical aspect of chikitsa seeking the absolute cure of disease, by eliminating its root cause

Acharya Vagbhata explained explained the treatment of basti treatments in AshtangaHridayasutrasthana chapter 19. This is called Basti vidhi Adhyaya

As per Acharya Sharangdhar in Sharangdhar Samhita, Niruha Basti is indicated to a person suffering from vatavyadhi and preparation of Kashaya is followed as mentioned in Sharangdhar Samhita. Sharangdhar Samhita, Uttarkhand, chapter 6, shlok 6, ppage 216

Almost all the Acharyas consider Basti as half or whole of the entire therapeutic measures and advocated best and quickest way to provide strength and immunity to even children and old people, but even then, there is neither proper acceptance nor precise scientific reasoning for the Basti procedure being established.

In Naturopathy, colon hydrotherapy is an important therapy and according to a text reproduced by researcher Junji Takano, by a Japanese medical association, in book "Colon Hydrotherapy" page 9. Dr. Norman W. Walker in this book "Colon Health: The key to a vibrant life" have covered nutrient, enemas, colon irrigation's in chapter 6. Stephen Holt, MD, PhD, LLD, DSc Distinguished

Professor of Medicine (Emerite), provides a modern account of the principles and practice of colon hydrotherapy in his book "The Definitive Guide to Colon Hydrotherapy", explained enema and hydrotherapy in page 197-208

Chapter 3

Types of Basti

Anuvasan Basti

Main Procedure of Anuvasan Basti

Instruments

Syringe of 100cc, gloves, simple rubber catheter no 10 or 12.

Preparation of patient

- Oleation and fomentation (at least of lumbar and lower abdomen) should be done.
- Patient should be with light breakfast (Charak Samhita Siddhi Stana 3 /15 to 19).

Preparation of basti

- Warm the oil at 40 to 45°C
- The quantity of oily substance is $\frac{1}{4}^{\text{th}}$ that of substance used for Niruha.
- In general 60, 120 or 240 ml is given.
- It should be always in lukewarm state. Too cold or too hot substances cause many adverse effects.

Administration of basti

- Keep the patient in left lateral position.
- Fill the syringe with warm oil.
- Remove the air from syringe as well as from catheter.
- Lubricate the catheter with the oil and insert through anus very gently.
- Push the oil with equal speed i.e. neither very slow nor fast.
- After removing catheter do tadan karma (Tapping) on lumbar or buttock region and ask patient to remain in same position for 5 to 10 minutes.

- Basti pratyagam kal (Time for getting out sneha dravya, with or without stool) is of 12 hours. If substance is not excreted in 12 hours, wait for 24hrs. If substance is still not excreted and there are no adverse effects then neglect it.
- But if adverse effects like bulging of abdomen, gas in abdomen, pain or discomfort in abdomen appear then use the following measures:
 - a. Pessary
 - b. Purgation with castor oil is given.
 - c. Fomentation
 - d. Use of Tikshna Basti- Cow urine or Gomutrasava is used.

Advantages of Properly Affecting Anuvasana (Samyakyog)

(Charak Samhita Siddhi Stana 1/43)

- Timely removal of waste products (mala) with oily substances (Charak Samhita Siddhi Stana 1/43)
- No adverse side effects
- Provides nutrition for Dhatus
- Lightness in the body
- Strength of the body increases

Symptoms Suggesting Incomplete Action of Anuvasana Basti

(Charak Samhita Siddhi Stana 1/44)

- Body ache
- Dryness in the body
- Nausea
- Drowsiness

Precautions to be taken after Treatment

If basti dravyas are excreted in time then light meal is advised. If oily substances are retained in the body without any adverse effects, then patient have to drink lukewarm water treated with dhanyak and shunthi (for proper digestion of oily substances), Light diet is advised.

Niruha or Asthapan Basti

Main Procedure

Instruments

Enema pot, simple rubber catheter no.12, gloves

Preparation of patient

- Oleation and fomentation (at least of lumbar and lower abdomen) should be done.
- Patient should be with empty stomach.

Preparation of basti dravyas

- First mix honey and saindhav homogenously.
- Add oil and again mix drug homogenously.
- Now add the kalka i.e. paste of drug and make the mixture homogenous
- After kalka gomutra (if indicated) should be added and at the last warm decoction should be added.
- Final prepared basti dravya should be homogenous and warm (around 40 to 45° C).
- Once the mixture is prepared it cannot be heated.

5.2 Administration of basti

- Give left lateral position to the patient.
- Basti dravyas are filled in the Enema pot. Air should be removed through tube and catheter.
- Lubricate the catheter with oil and insert in the anus slowly and allow the basti dravya to pass through the anus without the disturbance.
- After basti karma, tell the patient for excretion if it demands.
- After that the time taken for expulsion of medicinal decoction is called 'Basti pratyagam kal'.

- Wait and watch for basti pratyagam kal. It should be of 48 minutes. If Niruha Basti remains in the body for longer time, it causes pain and adverse effects. In such situation, following measures can be used:
 - a. Use of stronger decoction for Basti
 - b. Purgation
 - c. Fomentation
 - d. If the basti pratyagam kal is very short, then the desired effect cannot be achieved.
 - e. In that case, go for Niruh Basti again.
 - f. If it also fails then go for Niruh basti on the next day after Anuvasana or Matrabasti.

5.3 Age Specific Niruha Basti Dose

(Charak Samhita Siddhi sthana 3/31 & 32)

- 1 - 10 years = 40 ml- 50 ml
- 10 - 15 years= 200 ml 300 ml
- 15 - 18 years= 300 ml 600 ml
- 18 - 70 years = 400 - 500 ml to 1000 ml
- Over 70 years = 400 ml 800 ml
- In practice usually Up to 800 ml quantity is commonly used in adult.

Benefits of Niruha Basti

- Prevents aging of the body
- Promotes happiness, longevity, strength, agni, intellect, voice and complexion
- Brings balance to the metabolism (cleanses dhatus)
- It helps in curing all disease
- It promotes a robust body
- It enriches semen and ovum
- Cleans ama from the channels of the body

Some Other types of Useful Basti

Madhutailik Basti

Madhutailik basti is a sub-type of Niruh basti in which madhu i.e. honey and taila i.e. oils are used in equal or much more quantity.

Yapanbasti

It is used for children, women, old age persons, for removal of vitiated doshas and also for the improvement of complexion and voice. This Basti provides longevity of human being.

Substances used are honey and oil, approximately 90g each + Erand root decoction 180ml + Shatpushpa Churna 20mg + Saindhav (Rock salt) 10 Gm + Madanphal Churna 10 gm.

Siddha basti

Increases strength, muscle power, improves complexion.

Substances used – Yava, Kulattha, Pippali, Yashtimadhu, Saindhav, Honey. Generally each substance is taken in 40 gm dose and water is added 4 times and after boiling till it remains 1/4th it is given in 250 ml dose.

Rajyapan Basti

Cleansing and tonifying in nature.

Indications

- Indicated in Urinary tract infections, glomerulo nephritis, avascular degeneration or necrosis of hip joints, Inguinal and Scrotal pain, Musculoskeletal diseases like muscular dystrophy, neurological cases like Multiple sclerosis, Parkinson's disease etc.
- It is recommended in dry allergic cough or in COPDs like emphysema, bronchiectasis, chronic fever, gouty arthritis, irritable bowel syndrome, Knee joint osteoarthritis etc. It is used in Auto immune conditions like Ankylosing spondylosis and Rheumatoid arthritis.

Ingredients

- Decoction of Ashwagandha, Shatavari, Erandamool, Bala in a dose of 240 ml
- Honey-20 ml
- Rock salt- 5 Gm
- Sesame oil- 40 ml
- Ghee- 40 ml
- Meat soup – 160 ml & Cow Milk – 160 ml

Benefits

Rajyapan Basti increases the strength, it increases the sexual drive, improves the digestion and Vital sap.

Chapter 4

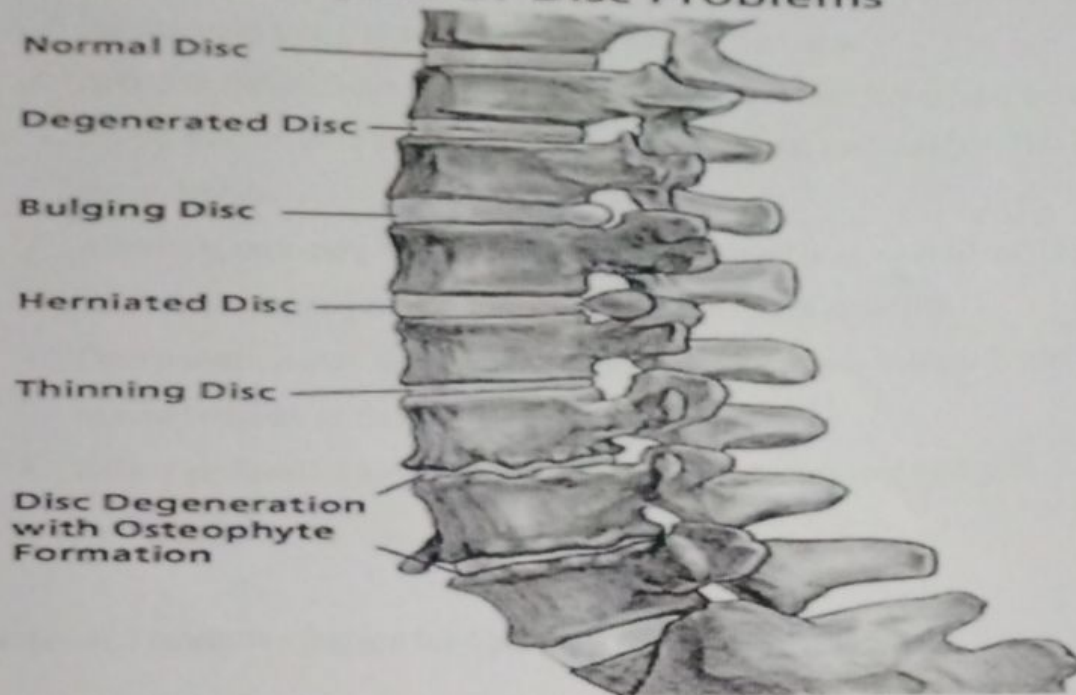
Comparative study among patients

Definition of Back pain

Pain felt in the low or upper back. Causes of pain in the low and upper back include conditions affecting the bony spine; discs between the vertebrae; ligaments around the spine and discs; spinal inflammation; spinal cord and nerves; muscles; internal organs of the pelvis, chest, and abdomen; tumors; and the skin.

As per National Institute of Neurological Disorders and Stroke, back pain is a common disorder involving the muscles, nerves, and bones of the back. Pain can vary from a dull constant ache to a sudden sharp feeling. Back pain may be classified by duration as acute (pain lasting less than 6 weeks), sub-chronic (6 to 12 weeks), or chronic (more than 12 weeks). The condition may be further classified by the underlying cause as either mechanical, non-mechanical, or referred pain. The symptoms of low back pain usually improve within a few weeks from the time they start, with 40–90% of people completely better by six weeks.

Examples of Disc Problems



Back pain commonly stems from strain, tension, or injury. Frequent causes of back pain are:

- strained muscles or ligaments
- a muscle spasm
- muscle tension
- damaged disks
- injuries, fractures, or falls
- Activities that can lead to strains or spasms include:
 - lifting something improperly
 - lifting something that is too heavy
 - making an abrupt and awkward movement

Structural problems

A number of structural problems may also result in back pain.

- **Ruptured disks:** Each vertebra in the spine is cushioned by disks. If the disk ruptures there will be more pressure on a nerve, resulting in back pain.
- **Bulging disks:** In much the same way as ruptured disks, a bulging disk can result in more pressure on a nerve.

- **Sciatica:** A sharp and shooting pain travels through the buttock and down the back of the leg, caused by a bulging or herniated disk pressing on a nerve.
- **Arthritis:** Osteoarthritis can cause problems with the joints in the hips, lower back, and other places. In some cases, the space around the spinal cord narrows. This is known as spinal stenosis.
- **Abnormal curvature of the spine:** If the spine curves in an unusual way, back pain can result. An example is scoliosis, in which the spine curves to the side.
- **Osteoporosis:** Bones, including the vertebrae of the spine, become brittle and porous, making compression fractures more likely.
- **Kidney problems:** Kidney stones or kidney infection can cause back pain.

Causes and causative factors for backpain

The human back is composed of a complex structure of muscles, ligaments, tendons, disks, and bones, which work together to support the body and enable us to move around. The segments of the spine are cushioned with cartilage-like pads called disks. Problems with any of these components can lead to back pain. In some cases of back pain, its cause remains unclear. The vast majority of low back pain is mechanical in nature. In many cases, low back pain is associated with spondylosis, a term that refers to the general degeneration of the spine associated with normal wear and tear that occurs in the joints, discs, and bones of the spine as people get older.

Some examples of mechanical causes of back pain include:

- Sprains and strains account for most acute back pain. Sprains are caused by overstretching or tearing ligaments, and strains are tears in tendon or muscle. Both can occur from twisting or lifting something improperly, lifting something too heavy, or overstretching. Such movements may also trigger spasms in back muscles, which can also be painful.
- Intervertebral disc degeneration

Intervertebral disc degeneration is one of the most common mechanical causes of low back pain, and it occurs when the usually rubbery discs lose integrity as a normal process of aging. In a healthy back, intervertebral discs provide height and allow bending, flexion, and torsion of the lower back. As the discs deteriorate, they lose their cushioning ability. Herniated or ruptured discs can occur when the intervertebral discs become compressed and bulge outward (herniation) or rupture, causing low back pain.

- Sciatica

A traumatic injury, such as from playing sports, car accidents, or a fall can injure tendons, ligaments or muscle resulting in low back pain. Traumatic injury may also cause the spine to become overly compressed, which in turn can cause an intervertebral disc to rupture or herniate, exerting pressure on any of the nerves rooted to the spinal cord. When spinal nerves become compressed and irritated, back pain and sciatica may result.

- Spinal stenosis is a narrowing of the spinal column that puts pressure on the spinal cord and nerves that can cause pain or numbness with walking and over time leads to leg weakness and sensory loss.
- Skeletal irregularities include scoliosis, a curvature of the spine that does not usually cause pain until middle age; lordosis, an abnormally accentuated arch in the lower back; and other congenital anomalies of the spine.
- Abdominal aortic aneurysms occur when the large blood vessel that supplies blood to the abdomen, pelvis, and legs becomes abnormally enlarged. Back pain can be a sign that the aneurysm is becoming larger and that the risk of rupture should be assessed.

Other underlying conditions that predispose people to back pain include:

- Inflammatory diseases of the joints such as arthritis, including osteoarthritis and rheumatoid arthritis as well as spondylitis, an inflammation of the vertebrae, can also cause low back pain. Spondylitis is also called spondylarthritis or spondyloarthropathy.
- Osteoporosis is a metabolic bone disease marked by a progressive decrease in bone density and strength, which can lead to painful fractures of the vertebrae.
- Endometriosis is the build-up of uterine tissue in places outside the uterus.
- Fibromyalgia, a chronic pain syndrome involving widespread muscle pain and fatigue.

Risk factors for developing back pain: Beyond underlying diseases, certain other risk factors may elevate one's risk for low back pain, including:

- **Age:** The first attack of back pain typically occurs between the ages of 30 and 50, and back pain becomes more common with advancing age. As people grow older, loss of bone strength from osteoporosis can lead to fractures, and at the same time, muscle elasticity and tone decrease. The intervertebral discs begin to lose fluid and flexibility with age, which decreases their ability to cushion the vertebrae. The risk of spinal stenosis also increases with age.
- **Fitness level:** Back pain is more common among people who are not physically fit. Weak back and abdominal muscles may not properly support the spine. "Weekend warriors"—people who go out and exercise a lot after being inactive all week—are more likely to suffer painful back injuries than people who make moderate physical activity a daily habit. Studies show that low-impact aerobic exercise is beneficial for the maintaining the integrity of intervertebral discs.

- Pregnancy is commonly accompanied by low back pain, which results from pelvic changes and alterations in weight loading. Back symptoms almost always resolve postpartum.
- Weight gain: Being overweight, obese, or quickly gaining significant amounts of weight can put stress on the back and lead to low back pain.
- Genetics: Some causes of back pain, such as ankylosing spondylitis, a form of arthritis that involves fusion of the spinal joints leading to some immobility of the spine, have a genetic component.
- Occupational risk factors: Having a job that requires heavy lifting, pushing, or pulling, particularly when it involves twisting or vibrating the spine, can lead to injury and back pain. An inactive job or a desk job may also lead to or contribute to pain, especially if you have poor posture or sit all day in a chair with inadequate back support.
- Mental health factors: Pre-existing mental health issues such as anxiety and depression can influence how closely one focuses on their pain as well as their perception of its severity. Pain that becomes chronic also can contribute to the development of such psychological factors. Stress can affect the body in numerous ways, including causing muscle tension.
- Backpack overload in children: Low back pain unrelated to injury or other known cause is unusual in pre-teen children. However, a backpack overloaded with schoolbooks and supplies can strain the back and cause muscle fatigue. The American Academy of Orthopaedic Surgeons recommends that a child's backpack should weigh no more than 15 to 20 percent of the child's body weight.

Back pain diagnosis :

A complete medical history and physical exam can usually identify any serious conditions that may be causing the pain. During the exam, a health care provider will ask about the onset, site,

and severity of the pain; duration of symptoms and any limitations in movement; and history of previous episodes or any health conditions that might be related to the pain. Along with a thorough back examination, neurologic tests are conducted to determine the cause of pain and appropriate treatment. The cause of chronic lower back pain is often difficult to determine even after a thorough examination.

Imaging tests are not warranted in most cases. Under certain circumstances, however, imaging may be ordered to rule out specific causes of pain, including tumors and spinal stenosis. Imaging and other types of tests include:

- X-ray is often the first imaging technique used to look for broken bones or an injured vertebra. X-rays show the bony structures and any vertebral misalignment or fractures. Soft tissues such as muscles, ligaments, or bulging discs are not visible on conventional x-rays.
- Computerized tomography (CT) is used to see spinal structures that cannot be seen on conventional x-rays, such as disc rupture, spinal stenosis, or tumors. Using a computer, the CT scan creates a three-dimensional image from a series of two dimensional pictures.
- Myelograms enhance the diagnostic imaging of x-rays and CT scans. In this procedure, a contrast dye is injected into the spinal canal, allowing spinal cord and nerve compression caused by herniated discs or fractures to be seen on an x-ray or CT scans.
- Discography may be used when other diagnostic procedures fail to identify the cause of pain. This procedure involves the injection of a contrast dye into a spinal disc thought to be causing back pain. The fluid's pressure in the disc will reproduce the person's symptoms if the disc is the cause. The dye helps to show the damaged areas on CT scans taken following the injection. Discography may provide useful information in cases where people are considering lumbar surgery or when their pain has not responded to conventional treatments.
- Magnetic resonance imaging (MRI) uses a magnetic force instead of radiation to create a computer-generated image. Unlike x-ray, which shows only bony structures, MRI scans also produce images of soft tissues such as muscles, ligaments, tendons, and blood

vessels. An MRI may be ordered if a problem such as infection, tumor, inflammation, disc herniation or rupture, or pressure on a nerve is suspected. MRI is a noninvasive way to identify a condition requiring prompt surgical treatment. However, in most instances, unless there are "red flags" in the history or physical exam, an MRI scan is not necessary during the early phases of low back pain.

- Acupuncture is moderately effective for chronic low back pain. It involves the insertion of thin needles into precise points throughout the body. Some practitioners believe this process helps clear away blockages in the body's life force known as Qi (pronounced chee). Others who may not believe in the concept of Qi theorize that when the needles are inserted and then stimulated (by twisting or passing a low-voltage electrical current through them) naturally occurring painkilling chemicals such as endorphins, serotonin, and acetylcholine are released. Evidence of acupuncture's benefit for acute low back pain is conflicting and clinical studies continue to investigate its benefits

Pathophysiology of back pain

Back pain encompasses three distinct sources:

- Axial lumbosacral,
- Radicular
- Referred pain

Annually, the prevalence of low back pain in the general US adult population is 10–30%, and the lifetime prevalence of US adults is as high as 65–80%.

- The lumbar spine forms the caudal flexible portion of an axial structure that supports the head, upper extremities, and internal organs over a bipedal stance. The sacrum forms the foundation of the spine through which it articulates with the sacroiliac joints to the pelvis. The lumbar spine can support heavy loads in relationship to its cross-sectional area. It resists anterior gravitational movement by maintaining lordosis in a neutral posture. Unlike the thoracic spine, the lumbar spine is unsupported laterally and has considerable mobility in both the sagittal and coronal planes. The bony vertebrae act as specialized structures to transmit loads through the spine

Pain is mediated by nociceptors, specialized peripheral sensory neurons that alert us to potentially damaging stimuli at the skin by transducing these stimuli into electrical signals that are relayed to higher brain centers. Nociceptors are pseudo-unipolar primary somatosensory neurons with their neuronal body located in the DRG. They are bifurcate axons: the peripheral branch innervates the skin and the central branches synapse on second-order neurons in the dorsal horn of the spinal cord. The second-order neurons project to the mesencephalon and thalamus, which in turn connect to somatosensory and anterior cingulate cortices in order to guide sensory-discriminative and affective-cognitive features of pain, respectively. The spinal dorsal horn is a major site of integration of somatosensory information and is composed of several interneuron populations forming descending inhibitory and facilitatory pathways, able to modulate the transmission of nociceptive signals. If the noxious stimulus persists, processes of peripheral and central sensitization can occur, converting pain from acute to chronic. Central sensitization is characterized by the increase in the excitability of neurons within the central nervous system, so that normal inputs

begin to produce abnormal responses. It is responsible for tactile allodynia, that is pain evoked by light brushing of the skin, and for the spread of pain hypersensitivity beyond an area of tissue damage. Central sensitization occurs in a number of chronic pain disorders, such as temporomandibular disorders, LBP, osteoarthritis, fibromyalgia, headache, and lateral epicondylalgia. Despite improved knowledge of the processes leading to central sensitization, it is still difficult to treat. Peripheral and central sensitization have a key role in LBP chronification. In fact, minimal changes in posture could easily drive long-lasting inflammation in the joints, ligaments, and muscles involved in the stability of the low back column, contributing to both peripheral and central sensitization. Furthermore, joints, discs, and bone are richly innervated by A delta fibers whose continuous stimulation could easily contribute to central sensitization.

Pathophysiology of Back Pain or Backache:

- **Radicular Pain:** Chronic pain caused by pinched nerve or irritation of the nerve at nerve root close to spinal cord or at foramina before its exit from the spinal canal.¹ Radicular pain is associated with tingling, numbness or weakness. Pain, tingling and numbness are

symptoms of sensory nerve injury called as radiculopathy. Sensory symptoms are associated with weakness if motor nerve is irritated or squeezed.

- **Muscular Pain:** Backache is also secondary to muscle spasm, muscle strains (pulled muscles) and tear in the back muscles. Backache is often observed in fibromyalgia and myofascial pain syndrome.²
- **Facet (zygapophysial) Joint Pain:** Facet joint pain is seen in older patients suffering with degenerative disk disease and in individuals following surgery or motor vehicle accident.
- **Ligamentum Flavum Hypertrophy:** This is observed after trauma, whiplash injury and surgery.
- **Posterior Ramus Syndrome (PRS):** Also recognized as Maigne syndrome or thoracolumbar junction syndrome. Cause of unexplained activation of the posterior ramus of thoracolumbar nerves is unknown.
- **Referred Pain:** Visceral pain from stomach, pancreas and kidney disease is often referred to lower back and mid back³:
- **Pregnancy:** Chronic low backache is a common complaint in second and third trimester.
- **Spondylosis:** Spondylosis occurs following thinning of the intervertebral discs because of loss of moisture and disc volume with age. Minor trauma under these circumstances causes inflammation and nerve root impingement, which can produce classic sciatica like pain without disc rupture.
- **Metastatic Cancer:** Metastasis of primary cancer of breast, lung, prostate, or colon is very often detected in the vertebral column. Tumor located on the spine may press against a nerve, resulting in radicular and back pain. Tumor may invade into facet joints and present symptoms like facet joint pain.⁴
- **Spinal Stenosis:** Narrowing of the spinal canal is called spinal stenosis and narrowing of foramina is called foraminal stenosis. Spinal stenosis eventually may cause spinal cord compression within the spinal canal. Spinal cord compression will result in symptoms of cauda equina syndrome.

- **Foraminal Stenosis:** Spinal foramen acts as a conduit to pass spinal nerves at each segment to distal organs. Foraminal are narrowed by protrusion of thick ligaments, facet joint hypertrophy, bony spurs and intervertebral disc herniation. Foraminal stenosis will squeeze the nerves causing pinched nerve symptoms.
- **Spondylolisthesis:** Also known as slipped disc or subluxation of the vertebrae. Anterior or posterior displacement will cause facet joint injury and dislocation as well as spinal stenosis.
- **Degenerative Disc Disease:** This is mostly observed in older patients. Thinning of discs causes foraminal stenosis and disc herniation.
- **Disc Bulge and Herniation:** Bulged disc is a result of protrusion of the jelly like central portion (nucleus pulposus) of the disc. Bulged disc pushes against a nerve root causing symptoms such as tingling, numbness and weakness in the dermatome of the injured nerve and group of muscles.
- **Fracture of Vertebrae:** Pain, numbness and weakness may be secondary to pinched nerve or spinal cord compression. Weakness, paralysis and autonomic dysfunction (bladder and bowel dysfunction) indicate spinal cord injury. Severe whiplash injury or fall can cause fracture and dislocation.
- **Long-Term Steroids:** Steroid treatment for long term will cause osteoporosis and osteoporosis may cause fracture of the vertebrae. Fractured vertebrae may lead to severe intractable chronic pain as described earlier.

Comparative study of back pain among patients

Back pain is a difficult condition to effectively treat and continues to affect millions of Americans every year. In the current investigation, I present a comprehensive review of back pain and my cases are based on patient's below aspects

Case Sheet- 1

Particulars of the patients					
Name of the patient					
Age			mrs archna kaul		Date
Sex			65		
Marital Status			F		
			Married		

The History

Presenting Complaints/Pradhan Vedana					
					low back pain radiating to the right leg.cant walk straight after long sitting
Associated Complaits/Anubandi Vedana					
					right foot heel pain and severe in the severe in the morning time.barely able to touch heel with floor
History of Past illness/Poorva Vyadhi Vrittanta				NA	
Family History/Kula Vrittanta				NA	
Personal Detail/Vayakthika Vrittanta					
Psychological History/Manasika Vrittanta				stressed	

Physical Examination

A) General Examination/ Samanya Pareeksha

Vital Signs					
Pulse	78 b/min				
Respiratory rate	normal				
BP	130/80mm of hg				
General look/Appearance				depressed	
Built				well built	
Weight				68kg	
Height				6ft	

B) Ashtha Sthana Pareeksha

1) Pulse/Nadi				vata pita	
2) Stool/Mala				prakrit	
3) Urine/Mutra				prakrit,5-6 times aday	
4) Tongue/Jihva				alpliata/partialy coated	
5) Speech/ Shabda				normal	
6) Touch/Sparsha				normal/anushna	
7) Eyes/Drik				prakrit	
8) Built/Akriti				madhyama	

C) Dasha Vidha Pareeksha

1) Dosha body type /Prakriti						
2) Pathology/Vikriti				vata pita		
3) Dhatu body type/Sara				asthi dhatu vikriti		
4) Compactness/Samhanana				mamsa,asthi		
5) Patient measurement/Pramana				madhyama		
6) Habits/ Satmya				supramanita		
7) Tolerance towards strong medical				sarvsara		
8) Digestion capacity/Ahara Shakti				madhyama		
9) Exercise capacity/Vyayama Shakti				prakrit		
10) Age/Vaya				avar		
				vridha		
Laboratory Examination						
MRI				not done		
X Ray				degenerative changes in lumbosacral joint		
ECG						
Blood test						
CT Scan						
Treatment						
				matra basti for 8 days with sahacharadi kuzambu		
				60 ml per day.with this patient took oral medication		
				sahacharadi kashay and yograg guggulu		
Results						
				pain reduced by 70 %		
				tenderness of heel reduced		
				patient feels active now		

Case Sheet- 2

						Date
Name of the patient				mr. Isac		
Age				53		
Sex				male		
Marital Status				married		
The History						
Presenting Complaints/Pradhan Vedana						
Associated Complaits/Anubandi Vedana						
History of Past illness/Poorva Vyadhi Vrittanta				diabeties and hypertension		
Family History/Kula Vrittanta				diabetic father		
Personal Detail/Vayakthika Vrittanta						
Psyncological History/Manasika Vrittanta				irritability		
A) General Examination/ Samanya Pareeksha						
Vital Signs						
		Pulse	80b/min			
		Respiratory rate	normal			
		BP				
General look/Appearance			ill looked			
Built			Well built/			
Weight			71			
Height			5ft 4 inch			
B) Ashtha Sthana Pareeksha						
1) Pulse/Nadi				vata kapha		
2) Stool/Mala				badha /prone to constipation		
3) Urine/Mutra				prakrit 5to6 times a day		
4) Tongue/Jihva				uncoated		
5) Speech/ Shabda				normal		

6) Touch/Sparsha

7) Eyes/Drik

8) Built/Akriti

normal

normal

madhyama

C) Dasha Vidha Pareeksha

1) Dosha body type /Prakriti

2) Pathology/Vikriti

3) Dhatu body type/Sara

4) Compactness/Samhanana

5) Patient measurement/Pramana

6) Habits/ Satmya

8) Digestion capacity/Ahara Shakti

9) Exercise capacity/Vyayama Shakti

10) Age/Vaya

MRI

X Ray

ECG

Blood test

CT Scan

yog basti for 10 daya,6 anuvasan +4 niruha basti

anuvasn with till tail 60 ml and niruha basti with dashmula kashaya

500 ml

and for 5 days spinal basti

patients pain and stiffness reduced by 80%

Case Sheet- 3

Particulars of the patients

Name of the patient	mrs A Banarjee
Age	61
Sex	
Marital Status	married

The History

Presenting Complaints/Pradhan Vedana

Associated Complaits/Anubandi Vedana

History of Past illness/Poorva Vyadhi Vrittanta

Family History/Kula Vrittanta

Personal Detail/Vayakthika Vrittanta

Psychological History/Manasika Vrittanta

depressed

A) General Examination/ Samanya Pareeksha

Vital Signs

Pulse 82b/min

Respiratory rate normal

BP 132/86mmof hg

General look/Appearance

looks very tired

Built

Well built/

Weight

78kg

Height

6ft

Case Sheet- 4

Particulars of the patients : ms shanti

Name of the patient		Mrs Daisy				Date
Age		48yrs				
Sex		f				
Marital Status		married				
The History						
Presenting Complaints/Pradhan Vedana						
Associated Complaits/Anubandi Vedana			sole of foot			
History of Past illness/Poorva Vyadhi Vrittanta						
Family History/Kula Vrittanta			mother has thyroid and slip disc			
Personal Detail/Vayakthika Vrittanta						
Psychological History/Manasika Vrittanta			looking healthy			
Physical Examination						
A) General Examination/ Samanya Pareeksha						
Vital Signs						
Pulse						
Respiratory rate						
BP						
General look/Appearance		Healthy				
Built		Well built/Poorly built/Gaint/□				
Weight						
Height						
B) Ashtha Sthana Pareeksha						
1) Pulse/Nadi		74b/min				
2) Stool/Mala		abdha				
3) Urine/Mutra		prakrit				
4) Tongue/Jihva		alipta				
5) Speech/ Shabda		prakrit				
6) Touch/Sparsha		soft				

7) Eyes/Drik			prakrit				
8) Built/Akriti			madhyama				
C) Dasha Vidha Pareeksha							
1) Dosha body type /Prakriti							
2) Pathology/Vikriti				kapha vata			
3) Dhatu body type/Sara				asthi ,meda dhatu vikriti			
4) Compactness/Samhanana				meda sara			
5) Patient measurement/Pramana				madhyama			
6) Habits/ Satmya				madhyama			
7) Tolerance towards strong medical treatment/Satva					rooksha satmaya		
8) Digestion capacity/Ahara Shakti					madhyama		
9) Exercise capacity/Vyayama Shakti					madhyama		
10) Age/Vaya					avara		
					madhyama		
Laboratory Examination							
MRI							
X Ray							
ECG							
Blood test				all test are normal			
CT Scan							
Treatment							
				patient took yoga basti with dashmool kwath and till tail			
Results							
				at low back pain releived by70%			

Name of the patient : ms anjali							Date
Age				24years			
Sex				f			
Marital Status				unmarried			
The History							
Presenting Complaints/Pradhan Vedana						upper and lower back pain since 2 years	
Associated Complaits/Anubandi Vedana							
History of Past illness/Poorva Vyadhi Vrittanta						pain in hip region also,acidity	
Family History/Kula Vrittanta							
Personal Detail/Vayakthika Vrittanta							
Psychological History/Manasika Vrittanta						cheerfull person	
Physical Examination							
A) General Examination/ Samanya Pareeksha							
Vital Signs							
Pulse				78b/min			
Respiratory rate				normal			
BP				120/80mm of hg			
General look/Appearence				healthy			
Built				normal			
Weight				65kg			
Height				5ft			
B) Ashtha Sthana Pareeksha							
1) Pulse/Nadi				vata pita			
2) Stool/Mala				badha			
3) Urine/Mutra				prakrit			
4) Tongue/Jihva				partialy coated			
5) Speech/ Shabda				prakrit			
6) Touch/Sparsha				soft			
7) Eyes/Drik				normal			
8) Built/Akriti				madhyama			
C) Dasha Vidha Pareeksha							
1) Dosha body type /Prakriti				vata pita			
2)Pathology/Vikriti				vata and pita dosha vikriti			
3) Dhātu body type/Sara							
4) Compactness/Samhanana				madhyama			
5) Patient measurement/Pramana				supramana			
6) Habits/ Satmya				saravsara			
7) Tolerance towards strong medical treatment/Satva						madhyama	
8) Digestion capacity/Ahara Shakti						avara	
9) Exercise capacity/Vyayama Shakti						avara	
10) Age/Vaya						madhyama	

Laboratory Examination							
Age							
Sex							
Blood test							
CT Scan							
Treatment							
	ECG						
	first five days matra basti with till tail 60 ml						
	then in 10 days gap luke warm water basti for 5 days						
Results							
	pain reduced						
	patient feels active and healthy						

Case Sheet- 6

Particulars of the patients

Name of the patient : Ms Pooja				Date	
Age	72				
Sex	female				
Marital Status	married				
The History					
Presenting Complaints/Pradhan Vedana				low back ache since 8 years and radiates to right leg	
Associated Complaints/Anubandi Vedana					
History of Past illness/Poorva Vyadhi Vrittanta					
Family History/Kula Vrittanta				diabetes, hypertension	
Personal Detail/Vayakthika Vrittanta					
Psychological History/Manasika Vrittanta				depressed	
Physical Examination					
A) General Examination/ Samanya Pareeksha					
Vital Signs					
Pulse					
Respiratory rate					
BP					
General look/Appearance		Cheerful			
Built		Poorly built			
Weight					
Height					
B) Ashtha Sthana Pareeksha					
1) Pulse/Nadi		vata			
2) Stool/Mala		badha			
3) Urine/Mutra		normal			
4) Tongue/Jihva		uncoated			
5) Speech/ Shabda		normal			
6) Touch/Sparsha		khara			
7) Eyes/Drik		normal			
8) Built/Akriti		heena			
C) Dasha Vidha Pareeksha					
1) Dosha body type /Prakriti		vata			
2) Pathology/Vikriti		vata dosha and asthi dhatu			
3) Dhatu body type/Sara		heena samhita			
4) Compactness/Samhanana		heena pramana			
5) Patient measurement/Pramana		rooksha			
6) Habits/ Satmya		avara			
7) Tolerance towards strong medical treatment/Satva		avara			
8) Digestion capacity/Ahara Shakti		avara			
9) Exercise capacity/Vyayama Shakti		vridha			
10) Age/Vaya					
Laboratory Examination					
MRI		degenerative changes			
X Ray		ECG			
Blood test					
CT Scan					

Treatment							
	anuvasan basti with till tail for 5 days						
	40 ml each day						
Results							
	60% relief in symptoms and patient feels active						

Case Sheet- 7

Particulars of the patients

Name of the patient		Anjuman bano		Date	
Age		28years			
Sex		female			
Marital Status		married			
The History					

Presenting Complaints/Pradhan Vedana

Associated Complaits/Anubandi Vedana					
History of Past illness/Poorva Vyadhi Vrittanta					
Family History/Kula Vrittanta					
Personal Detail/Vayakthika Vrittanta				very irritable	
Psychological History/Manasika Vrittanta				deprssed	
Physical Examination					
A) General Examination/ Samanya Pareeksha					

Vital Signs

Pulse					
Respiratory rate					
BP					
General look/Appearance		ill looked			

Built		poorly built			
Weight		45kg			
Height		5ft			

B) Ashtha Sthana Pareeksha

1) Pulse/Nadi		vata papha			
2) Stool/Mala		normal			
3) Urine/Mutra		normal			
4) Tongue/Jihva		uncoated			
5) Speech/ Shabda		normal			
6) Touch/Sparsha		normal,soft			
7) Eyes/Drik		normal, not pale			
8) Built/Akriti		madhyama			

1) Dosha body type /Prakriti					
2) Pathology/Vikriti				vata kapha	
3) Dhatus body type/Sara				vata dosha and asthi dhātu	
4) Compactness/Samithatana				sarva sara	
5) Patient measurement, Pramāna				madyama samitha	
6) Habits/Satmya				supramena	
7) Tolerance towards strong medical treatment/Sava				pragdha satmya	
8) Digestion capacity/Ahara Shakti				madyama	
9) Exercise capacity/Viyayana Shakti				madyama	
10) Age/Vaya				avara	
				madyama	
Laboratory Examination					
(Hb)					
X Ray					
ECG					
Blood test					
CT Scan					
Treatment:					
				matra basti and spinal basti given for 5 days	
Results					
				pain reduced by 75% and not radiating to legs and arms	

Case Sheet- 8

Particulars of the patients

Name of the patient		dr mukul mishra		Date
Age	55years			
Sex	male			
Marital Status	married			
The History				
Presenting Complaints/Pradhan Vedana				
Associated Complaits/Anubandi Vedana				
History of Past illness/Poorva Vyadhi Vrittanta				
Family History/Kula Vrittanta				
Personal Detail/Vayakthika Vrittanta				
Psychological History/Manasika Vrittanta				
stressfull				
Physical Examination				
A) General Examination/ Samanya Pareeksha				
Vital Signs				
Pulse		80b/min		
Respiratory rate		normal		
BP		132/86mmofhg		
General look/Appearance		depressed		
Built		tall structure		
Weight		68kg		
Height		6ft		
B) Ashtha Sthana Pareeksha				
1) Pulse/Nadi		vata kapha		
2) Stool/Mala		mostly costipated		
3) Urine/Mutra normal 5-6 times a day and 1-2 times at night				
4) Tongue/Jihva		uncoated		
5) Speech/ Shabda		normal		
6) Touch/Sparsha		normal		
7) Eyes/Drik		normal		
8) Built/Akriti		madhyama		

C) Dasha Vidha Pareeksha									
1) Dosha body type /Prakriti									
2) Pathology/Vikriti									
3) Dhatu body type/Sara									
4) Compactness/Samhanana									
5) Patient measurement/Pramana									
6) Habits/ Satmya									
7) Tolerance towards strong medical treatment/Satva									
8) Digestion capacity/Ahara Shakti									
9) Exercise capacity/Vyayama Shakti									
10) Age/Vaya									
Laboratory Examination									
MRI									
X Ray									
ECG									
Blood test									
CT Scan									
Treatment									
patient undergone basti treatment for 10 days									
anuvasana with sahacharadi kuzumbu and kashya basti with dashmula kwath									
Results									
swelling of knees decreased									
patient is bit stress free now									

Case Sheet- 9

Particulars of the patients

Name of the patient : ms roli

Date

Age				27		
Sex				female		
Marital Status				unmarried		
The History						
Presenting Complaints/Pradhan Vedana				low back ache since 1 year sometime upper back also		
Associated Complaits/Anubandi Vedana				constipation		
History of Past illness/Poorva Vyadhi Vrittanta						
Family History/Kula Vrittanta						
Personal Detail/Vayakthika Vrittanta						
Psychological History/Manasika Vrittanta				anxiety		
Physical Examination						
A) General Examination/ Samanya Pareeksha						
Vital Signs						
Pulse				74b/min		
Respiratory rate				normal		
BP				normal		
General look/Appearance				healthy		
Built				well built		
Weight				55kg		
Height				5ft		
B) Ashtha Sthana Pareeksha						
1) Pulse/Nadi				vata pita		
2) Stool/Mala				badha		
3) Urine/Mutra				normal 5-6 times a day and 1-2 times at night		
4) Tongue/Jihva				partialy coated		
5) Speech/ Shabda				prakrit		
6) Touch/Sparsha				soft		
7) Eyes/Drik				normal		

1) Built/Akriti		madhyama				
2) Dasha Vidha Pareeksha						
3) Dosha body type /Prakriti		vata pita				
4) Pathology/Vikriti		vata dosha				
5) Dhatu body type/Sara		satwa				
6) Compactness/Samhanana		madhyama				
7) Patient measurement/Pramana		supramana				
8) Habits/ Satmya			sarva sara			
9) Tolerance towards strong medical treatment/Satva			madhyama			
10) Digestion capacity/Ahara Shakti			madhyama			
11) Exercise capacity/Vyayama Shakti			madhyama			
12) Age/Vaya			bala			
Laboratory Examination						
MRI						
X Ray						
ECG						
Blood test						
CT Scan						
Treatment						
bast given with lukewarm water for 5 days						
then after 5 days basti with till tail 60 ml						
Results						
patient feels better and stress free						

particulars of the patients

Name of the patient : rohit

Date _____

32years

male

married

Presenting Complaints/Pradhan Vedana

low back pain since 2 years

pain radiating to left leg

Psychological History/Manasika Vrittanta				
--	--	--	--	--

cheerfull person

Physical Examination		
A) General Examination/ Samanya Pareeksha		

Vital Signs

78b/min

normal

120/80

General look/Appearance	
-------------------------	--

healthy

well built

68kg

5ft 3inch

	B) Ashtha Sthana Pareeksha	
--	----------------------------	--

1) Pulse/Nadi

vata

2) Stool/Mala

abadha

3) Urine/Mutra

normal

4) Tongue/Jihva

uncoated

5) Speech/ Shabda

normal

6) Touch/Sparsha

normal

7) Eyes/Drik

normal not pale

8) Built/Akriti

madhyama

c) Dasha Vidha Pareeksha

1) Dosha body type /Prakriti							
2) Pathology/Vikriti				vata			
3) Dhatu body type/Sara				vata dosha, majja dhatu			
4) Compactness/Samhanana							
5) Patient measurement/Pramana				madhyama			
6) Habits/ Satmya				supramana			
7) Tolerance towards strong medical treatment/Satva				saravsara			
8) Digestion capacity/Ahara Shakti						madhyama	
9) Exercise capacity/Vyayama Shakti						madhyama	
10) Age/Vaya						madhyama	
Laboratory Examination							
MRI							
X Ray		buldge at I4 and I5					
ECG							
Blood test							
CT Scan							
Treatment							
		anuvasan basti +kashaya basti for 10 days on alternate day					
Results							
		releived symptoms by 90%					
		patient was very happy					

Conclusion

The improvement in the symptoms of *Kati Graha* can be attributed to two major factors i.e. reduction of pain in spine that may be due to analgesic and anti-inflammatory effect of drugs or/and due to increased nourishment to the spine which helps in improving disc size. Pain is inherent quality of *Vata*. Most of the drugs were *Vata Kapha Shamaka* having hot potency and oleation property there by pacify aggravated *Vata*. Further, these improve the function of *Vyana Vayu* specifically which is responsible for the movements. In the current pathogenesis it is clearly seen that sciatica (*Gridrasivat Pida*) is a symptom at the 3rd stage of degenerative cascade model where nerve impingement takes place. The symptoms like *Pada Harsha*, *Pada Gaurava*, *Pada Supti* of radiculopathy may have reduced due to reduction of inflammation.

With the treatment, one patient had eight times bowel movements after initial *Niruha* but after proper rehydration measures, the patient was able to under go remaining course of *Basti*. The first *Basti* may act as natural cleansing agent (*Koshta Shuddhi*) in this patient who was of *Mridu Koshta* (sensitive bowel).

Basti karma plays a vital role in healing and curing various diseases and disorders. The mode of actions of *Basti* takes place in the following three ways:

1. Absorption Mechanism
2. System Biology Concept
3. Neural Stimulation Mechanism

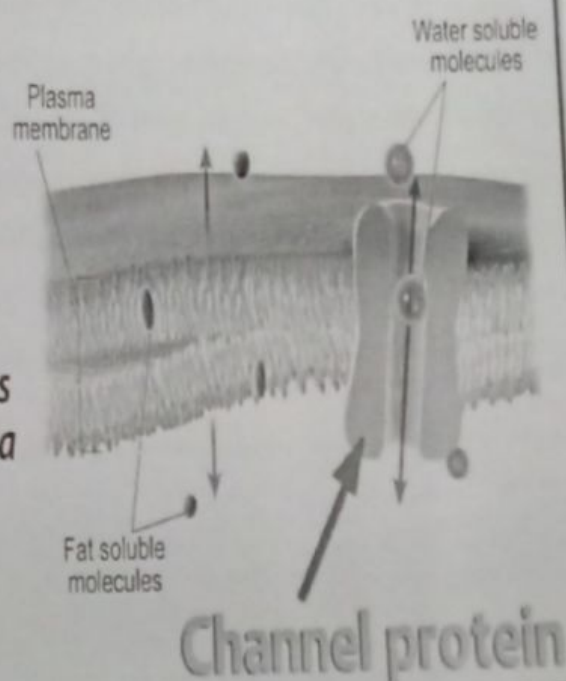
MECHANISM OF BASTI BY ABSORPTION MECHANISM

In the *Basti* -ayurvedic medicinal solution is administered in the rectum. Those medicines and *taila* of *Basti*, after reaching the rectum and colon, causes secretion of bile from the gallbladder and other hormones. The secretions lead to the formation of conjugate micelles. These micelles are absorbed through passive diffusion.

For example, the middle-chain fatty acid present in *Dashmoola Taila* of *Anuvasana Basti* gets absorbed from colon and large intestine part gastrointestinal tract (GIT) and breaks the pathology of the disease.

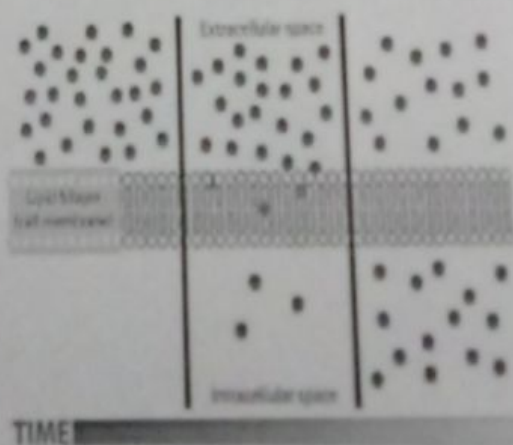
Carrier-mediated transport

the process by which molecules pass through a membrane via a channel protein



Passive Diffusion

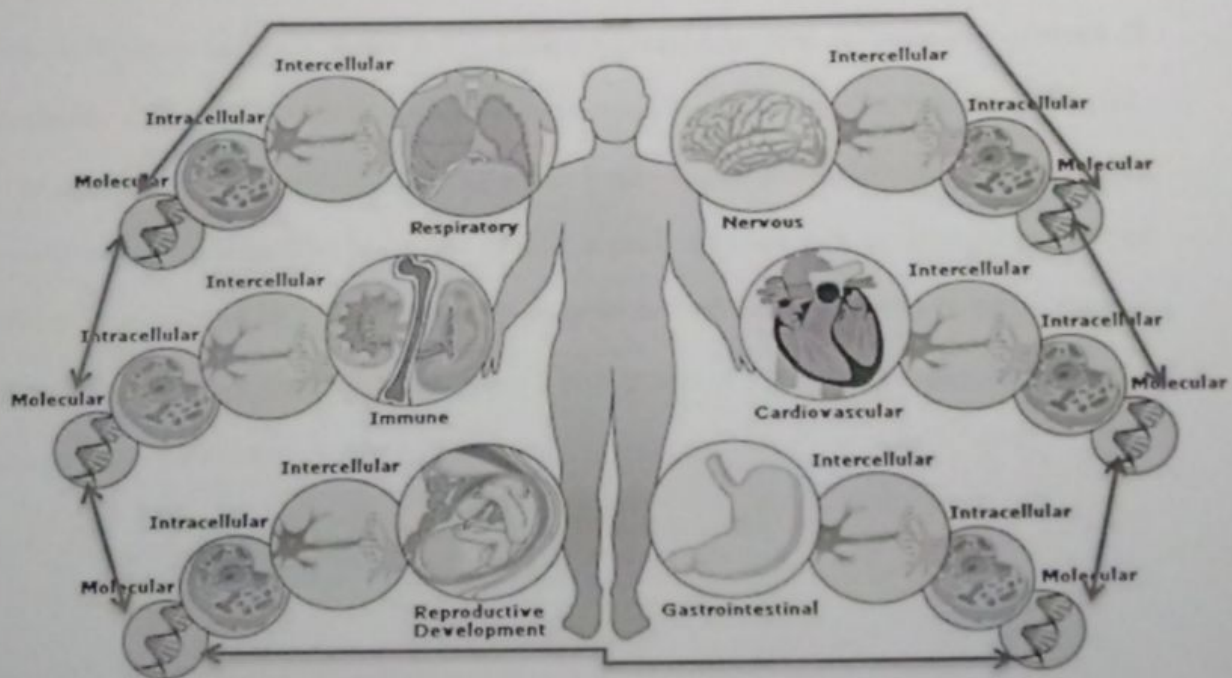
Diffusion is the net movement of material from an area of **high concentration** to an area with **lower concentration**. The difference of concentration between the two areas is often termed as the **concentration gradient**, and diffusion will continue until this gradient has been eliminated.



Biology Concept :

Mechanism and Role of Basti in the management of various disorders and diseases can be explained by the System Biology Concept:

A human is made up of various systems like respiratory, circulatory, etc. All systems have various organs and all the organs are connected at a molecular level. Systems are made up of organs and Organs are made up of tissues and tissues are in turn made up of cells. So anything happens at the tissue level transformed at the cellular level then at the tissue level and ultimately at the organ level. Thus effects of Basti not only restricted to the gastrointestinal system but also affect other systems. Basti helps to maintain the physical and chemical parameters that the human body must maintain to allow proper functioning of its component cells, tissues, organs, and organ systems stable internal environment of the body

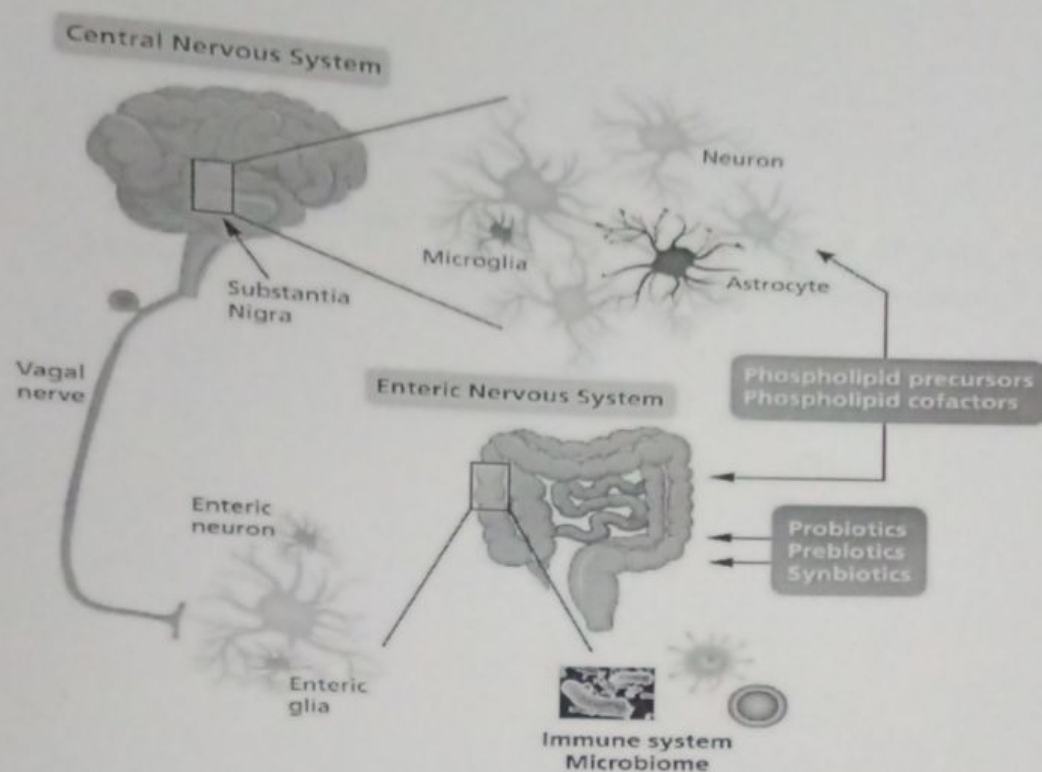


Our body has a range of environmental (internal as well as external) parameters within which it works best and body – viz organs and organ systems (like digestive, circulatory, excretory systems etc) have to maintain balance to get stability. The balance is shifted or disrupted viz if the

balance is not maintained; the results may not allow normal functioning of the body. Basti at the biological level helps to attain this balance and therefore your body system works together to maintain balance and homeostasis.

Mode of Action of Basti by Neural Stimulation Mechanism

At neural level Basti works on the kinetics of "hit and run" module. For better understanding, let's take an example of hypertension (High blood pressure). Results have proven that Basti is very effective in the reduction of high blood pressure to the normal level. Blood pressure is regulated by feedback of the neural tissue of Vasomotor centre. Now activity of VMC is depended upon reflexes from the higher center as well as from neural and chemical periphery. Sympathetic stimulation causes activation of pressure area of VMC, which in turn causes vasoconstriction and leads to rise in BP, while parasympathetic stimulation causes activation of depressor area of VMC, which in turn results in vasodilatation and precipitates decrease in BP. The long-term regulation of BP occurs through Renin-Angiotensin-Aldosterone (RAA) axis of endocrine mechanisms. The lower part of GIT is richly supplied with parasympathetic nerves which on stimulation with Basti (either by chemical or mechanical receptor) cause decrease in secretion of RAA complex, and by activating depressor area of VMC which causes vasodilatation and results in the decrease in BP.



Enteric Nervous System (ENS) works in synergism with the CNS on stimulation with Basti (either by chemo or mechano-receptors) and may lead to activation of depressor area of VMC, which finally causes a decrease in BP. It is not mandatory for a drug to remain in contact with the receptor for a long time e.g. in proton pump inhibitor mechanism, the drug interacts with the receptor and gets flushed out from circulation, it is known as "hit and run module" of kinetics. The same module of kinetics can be hypothesized for Niruha Basti.

Hence we can say that Basti has been rated as the most effective of the Ayurvedic Panchakarma therapies. Here are some of the benefits of Basti:

It helps in keeping the Vata Dosha under control, which also helps in maintaining the balance of Kapha & Pitta Dosha. Thus all the three Doshas are under control with this treatment.

- It increases the immune system of the body through its cleansing process.
- It can cure diseases like Colitis, Cervical Spondylosis, Digestive Disorders, Backache, Obesity Piles, and Convalescence, among others.
- It puts the body in a state of equilibrium.

- It is a wholesome treatment and provides substantial relief.
- It works on entire physiological and neurological levels to get the bodily internal homeostasis i.e. maintain the balance of body to keep the patients firm and healthy.

References

1. Sushruta Samhita Chikitsa Sthana 35 /17 to 18.
2. Sushruta Samhita Chikitsa Sthana 37 / 4 to 6.
3. Sushruta Samhita Chikitsa Sthana 38 / 37 to 41.
4. Ashtanga Hrudaya Sutrasthana Chapter 19 /61.
5. Sharangadhar Samhita Uttarkhanda 5/1.
6. <http://shreevishvatejayurveda.in/panchkarma-centre/>