

Review Article

Wet cupping in patients with chronic lower back pain: Narrative Review

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Abstract

Interest in cupping is an emerging non-pharmacological option for treatment of pain. Cupping proved to be valuable treatment option for various illnesses including chronic pain. It is also named as prophetic medicine Cupping therapy, dry or wet cupping, have been used since ancient times in TCM owing to believe that it has more efficacy than pharmacological treatments. Cupping, Al-hijama, is

also followed in many Arabic countries, named as prophetic medicine. Cupping work on mechanism of dilatation of vessels and increasing local blood circulation to cure various illnesses. Lower back pain is prevalent in our community due to stressed environment, physical work load as well as underlying serious medical conditions. Literature review was conducted to report the scientific data published on effects of wet cupping in lower back pain. Multiple search engines i.e. NCBI, Pub Med, Science Direct, Scopus, etc. were used for review of literature. We have prepared this review article to the best of our knowledge and available data to facilitate the readers to better know the therapeutic effects of cupping therapy.

Key words

Lower Back Pain, Wet Cupping, Hijama, Arabic countries, Prophetic medicine, Vasodilation.

Introduction

The spine consists of 33 vertebrae, disks, the spinal cord and nerves. Spine is the main support structure of our body. The backbone aids in moving (sitting, standing, twisting and walking). Injuries of the back or problems related to vertebrae or spinal cords leads to pain in back. A normal and healthy spine consists of 3 curves that give it S-shape. These curves are helpful in absorbing shock and protecting from injuries. The spine consists of the following structures:

1) Vertebrae: these are little bones that are 33 in number joining together and form a canal known as spinal canal. This canal protects the spinal cord from different injuries [1]. Every vertebra consists of 3 main components one is a body that enables bearing load, the second part is the arch of vertebra function associated with protection of spinal cord, and the third part is transverse processes which provide a site for the attachment of ligaments [2].

2) Zygapophyseal joints: also known as facet joints consist of cartilage that permits the sliding of vertebra against each other. These joints provide the stability and flexibility. Arthritis of these joints leads to the development of back pain.

3) Intervertebral discs: these disks are flat and round-shaped cushions that are present between vertebrae and act as shock absorbers. The structure of the disk consists of the nucleus pulposus which is present in the center of the

disk and having gel-like consistency which is enveloped by an annulus (outer ring) which is flexible in nature. Disk herniation is a condition that allows the leakage of the central gel-like structure of the disk which is also a cause of back pain.

4) Spinal cord and pair of nerves: spinal cord starts from the skull and extends down to the lower back. It houses the spinal canal. 31 pairs of nerves move out through the opening of vertebra called a neural foramen. The function of these nerves is to transmit messages (spiking) between the muscles and the brain.

5) Soft tissue structures: vertebrae are connected to each other by means of ligaments which help in holding the spine in the right position. Muscles of the back provide support and aid in movement. Muscles are connected to bones by means of tendons which are also helpful in moving.

The spine is further divided into 5 different segments which start at the neck and end at the buttocks. The first segment is cervical consists of 7 vertebrae C1-C7, improving movements of the head. The second segment of the spine is thoracic consist of 12 vertebral bones T1-T12 which provide a site of attachment to the ribs. The third segment is lumbar which consists of 5 vertebral bones L1-L5 which builds the lower part of the spine. This region provides support to the weight of the upper body and also bears stress while lifting any object. Most of the back problems occur in this region. Forth segment is sacrum is a triangular bone connected with the hips. This

region consists of 5 bones from S1 to S5 which are fused with each other and unable to move. The fifth segment is the coccyx known as tailbone consists of 4 vertebrae fused with each other and provides an attachment site to the muscles and ligaments of a pelvic region [1].

Lower Back Pain

The pain of low back is one of the most common problems in the world. It affects above 80% of adults. Lower back pain is also named as the pain of lumbar region. Lumbar region is the area of the back that starts from the lower side of the ribcage. Lumbar region consists of 5 vertebrae from L1 to L5. This region provides support to the weight of the upper body. Back pain of lumbar region can involve the tendon, ligaments, or muscles. Lower back pain can be acute, subacute, and chronic. Pain of the lumbar region which lasts for 12 weeks or more is considered chronic and the pain which feel suddenly and lasts for few days to a few weeks 9 (less than 4 weeks) is considered acute lower back pain [3].

Most of the back pains of lumbar region are short-lived or acute and disappear in a few days with proper care. Nearly 20 % patients having acute lower back pain develop CLBP. Acute pain of lumbar region is usually self-limited but patients with CLBP need to visit a doctor. Pain might be dull or stabbing in nature which causes difficult for a patient to stand up straight or to move. Sometimes the pain continues its own but patient needs urgent care when the pain feels after some type of injury, the pain feels with control problems of both bladder and bowel, and back pain with weakness of one or both legs. Pain feels on coughing or while peeing also needs urgent care.

There are 2 main types of lower back pain

- **Mechanical pain:** back pain of the lower region is usually mechanical or nonspecific. This pain mostly emerges from the muscles, ligaments and bones present around the spine. This pain is localized to the lower region of the back

and hips. This pain usually feels when the spine is loaded or feels while moving [4].

- **Radicular pain:** in this type pain radiates from back and hips into the legs. This pain feels when the nerve roots of the spinal cord are inflamed. The pain that tumbles the legs and foot is named as sciatica. Sciatica is often caused by the compression of the spinal nerve root at the level of L5 and S1. This pain is sharp and burning in nature which associates with numbness dejecting in the legs. Sciatica gets worse with a certain type of movement like walking or sitting. This pain usually one sided. Radicular pain can occur due to the following reasons herniation of disc, diabetes, and injuries of nerve roots [5].

Incidence of Low Back Pain

According to a survey it has been estimated that about 80% or more people experience back pain of lumbar region at some point in life [6]. Every year about 7% of adults report the ailments of lower back pain [7]. Women are more affected by CLBP as compared to men [8, 9]. It has been estimated that females are about 2% more susceptible to CLBP as compared to males [10]. The prevalence of CLBP is 57.4 males and 70.3 females reported PER 1000 population [11]. It is one of the most common health issues in older people.

Epidemiological studies reveal occupational and psychosocial and age-related risk factors which lead to the development of CLBP [12]. Risk factors of CLBP that can be modified are mental problems like depression or anxiety, vigorous physical activities, injuries, excess weight, improper lifting, smoking, and immobility. Risk factors that cannot be modified are age-related changes in the body, gender, inheritance, low socioeconomic status, etc.

Mechanism of Low Back Pain

Commonly mechanical issues or injuries of the soft tissues like intervertebral disc damage or nerve root compression, leads to the development of LBP. Torsion of muscles or ligaments is the most common cause of LBP. When muscles are torn because of too far stretching and cause muscles to damage leads to muscle strain on the other hand, when a ligament is overstretched or torn it is known as ligaments sprain. Ligaments or muscles damage both show the same symptoms and also treated in same way [13]. Common causes of these conditions may include poor posture for a long time, sudden and a lot of stress on lower back, injuries during sports like twisting or impact of a huge force and lifting some heavy objects.

CLBP is usually occurs due to problems associated with discs and joints or due to the irritation of nerve roots. Common causes of CLBP are:

1. Lumbar disc herniation (LDH)

LDH is the most usual degenerative disease of the lumbar region of spine. In this condition pulposus nucleus which is composed of 80% water and rest 20% of proteoglycan and collagen, present in the intervertebral disc is displaced through the fibrous ring or external membrane [14]. With advancing age the production of proteoglycans is reduced which causes dehydration or collapse of a disc due to which strain on the outer fibrous ring results in tearing and fissuring and helps in herniation of the nucleus pulposus. Also overloading of stress put a large pressure on a healthy or normal disc which also results in leakage of intervertebral disc material through the fissured fibrous ring [15].

There are several causes of disc herniation reduction in retention of water and increase in ratio of type one collagen in the nucleus pulposus, collagen destruction and an increase in activity of the degrading systems such as apoptosis and inflammation. The increase in pressure on longitudinally located ligaments due to disc herniation leads to the pain of localized

region. Radicular pain of the lumbar region feels when the material of a disc put pressure on the nerve root of lumbar region which cause inflammation on ischemia of the nerve root. Connective tissue illnesses and congenital abnormalities i.e. short pedicle also causes LDH [16]. Patients present with the following signs and symptoms pain in a lower region of the back, radicular nature of pain, pain increases with coughing or sneezing, pain increases with pressure application or remain in seated.

Annually about 5 to 20 patients with LDH are reported per 1000 adults. Although LDH can occur at any age it is more common in the 40s or 50s. Over the age of 35 years its prevalence rate is about 4.8% among men and 2.5% among women Therefore, the age of 35 years is unique when men are more at risk of back pain than women.

2. Dysfunction of facet joint

There are pairs of little joints present between the vertebrae of the spine. Between the opposing surfaces of these joints cartilage is present which reduces the friction between adjacent joints. Because of having more exposure to stress and load, the joints of lumbar region are more vulnerable to injuries and degeneration. Lower back pain that originate from the facet joints is short-term initially and with time becomes chronic.

The prevalence of CLBP due to facet joint syndrome is about 15% and 41% [17]. It is a condition resembles to arthritis which leads to the degeneration of joints present between the bones of spine. Cartilage present in these joints undergoes degeneration and inflammation which trigger the signals of pain. If the facet joints of cervical regions are involved it leads to the pain in the neck and lower back pain occurs due to the involvement of facet joints of lumbar region [18]. The prevalence of cervical facet syndrome is about 55 % while the prevalence of lumbar facet dysfunction is 31% [19].

Clinically pain associated with dysfunction of the facet joint can be unilateral or bilateral, pain radiates to buttocks and thighs and pain un feel below the knees [20]. Dysfunction of facet joint is considered as primary cause of CLBP in about 10% to 15 % of adults. Degenerative conditions that lead to the dysfunction of facet joints includes osteoarthritis of facet joints, spondylolisthesis, septic arthritis of facet joint, and the development of cyst within the synovial membrane of facet joints. Some inflammatory conditions like rheumatoid arthritis and ankylosing spondylitis. Injuries or traumas of lumbar facet joints which may include acute injuries resulting from falls, accidents or injuries during sports or repetitive small injuries which is due to occupations that requires continuous bending, twisting or some gymnastics. Dislocation of facet joints also leads to CLBP. There are 2 types of dislocation of facet joints in the lumbar region of the spine 1) Subluxation and 2) locked facet [21].

The severity of lower back pain depends on the number of affected facet joints and the involvement of nerve roots. Pain may be dull and localized in nature if one side of a single facet joint is affected, and bilateral pain feels if both sides of facet joints are affected. Referred pain feels in case of arthritis of facet joints.

3. Lumbar spinal stenosis (LSS);

It is a condition in which the space within the spine becomes narrow which builds pressure on nerves passing through it causing pain weakness and numbness. This condition mostly affects the cervical region and limber region [22]. Spinal stenosis affects the 3 distinct sites present in the vertebral canal. Firstly it affects the central canal of the vertebral canal secondly it affects the neural foramen; the third site affected by spinal stenosis is a lateral recess of the vertebral column [23, 24].

Factors that lead to the development of LSS include 1): osteoarthritis of the spine in this condition the cartilage that covers the facet joint

undergoes degeneration, due to friction between bones an abnormal growth of bones known as bone spurs develops which leads to the narrowing of the neural foramen. 2): degenerating diseases of discs due to the dehydration or flattening of intervertebral discs leads to the narrowing of intervertebral foramina. 3): thickening of a ligament. 4): deformity of spinal cord 5): cysts or growths. LSS mostly occur in older people aged 50 or above, at young age it may occur due to some injuries and may be due to some congenital condition [25, 26].

LSS gets to worsen with time, but most without symptoms [27]. LSS present with radicular pain, pain radiates towards one arm or leg or rarely affects both legs and arms. The intensity of pain may be dull or present with burning sensations. Feelings of numbness, tingling or weakness travel down in the legs or arms. A patient may also present with bladder or bowel control.

4. Spondylolisthesis:

It is a condition in which one of vertebral body dismantles of its place on the other vertebrae present lower to it leading to mechanical pain or radicular pain. It may occur congenitally, may be acquired, or idiopathic in nature. It commonly occur in lumbar region of the spine and leads to CLBP [28]. There are 5 categories of spondylolisthesis named as 1): degenerative spondylolisthesis which mainly occurs in adult females as compared to males, 2): isthmic spondylolisthesis which is more common in males, 3): dysplastic spondylolisthesis, 4): traumatic and 5): pathological spondylolisthesis [29].

Incidences of spondylolisthesis in childhood are about 4-6 % with most of the cases reported with isthmic spondylolisthesis happening at the level of L5- S1 [30, 31]. Incidence raises in adulthood up to 5-10 5 with most cases of degenerative spondylolisthesis increasing rate in females mostly developing at the level of L4-L5 [30, 32, 33].

There are 5 grades of spondylolisthesis and the most common method used for the grading is named Meyerding's method of classification. Grading is done on the basis of anterior translation percentage with respect to adjacent levels [34]. If the degree of vertebrae slip is from 1% to 25% it is considered as grade 1 spondylolisthesis. Up to 50% of vertebrae slip is named as grade 2 spondylolisthesis. In grade 3 the degree of vertebral slip is near 75%. In grade 4 the slippage of vertebrae is from 76% to 100%. If the slippage is above 100% the grade of spondylolisthesis is 5. The incidence of grade 1 is about 75% of all cases. Most spondylolisthesis occurs at L5 to S1 level and the second most commonly occurs at L4 and L5 level [35].

Radiculopathy means pathology of nerve root along with paresthesia, anesthesia, loss of motor activities and pain, it can occur in any part of the spine but most commonly it affects the cervical and lumbosacral region and less commonly affects the thoracic region [5]. In lumbar radiculopathy patients present with pain in the lumbar region of the spine which radiates down in legs with straight leg raising test is positive. Patients describe the pain as electric, sharp, stinging or burning in nature with numbness or paresthesia. The strength of muscles is mostly preserved, only affected in severe cases of radiculopathy [6].

On the other hand, radicular pain is a single symptom arising from a single or more than one nerve root. Sciatica name is given to the pain that feels because of the irritation of the sciatic nerve root. Sciatica is usually caused by the compression of the sciatic nerve in the lumbar region. Sometimes sciatica is confused with general lumbar back pain but sciatica can extend to the lower region of the back and also radiates down to the lower extremities. In the human body, the sciatic nerve is considered the widest and longest nerve. The sciatic nerve runs from the lower region of the back crossing the buttock down to the legs and ending just below the knee.

Sciatic nerve controls the muscles of the lower legs and also provides sensations to the skin of most of the legs and feet. Sciatica is non-defined as disorder but it is a symptom of other conditions that affect the root of the sciatic nerve. According to the estimations of some experts about 40% of people experience sciatic pain once in their life. The primary etiology of lumbar radiculopathy is deteriorating spondyloarthropathies [2]. Disc herniation which causes the compression of the nerve root is also one of the leading causes of lumbar radiculopathy/ sciatica [6].

Spinal osteoarthritis, deformity of the spine, fracture or dislocation of the spine also causes CLBP. Less common causes of CLBP include infection of the spine also known as osteomyelitis, a tumor that originates in other body organs and later spread to the spine. Common tumors that can metastasize to spines are breast tumors, lung, thyroid tumors, and tumors of kidney or prostate. Some autoimmune diseases like rheumatoid arthritis or Crohn's disease can also cause CLBP [36, 37].

Diagnostic measures of LBP

Early evaluation of CLBP includes history taking and physical examination of the patient to categorize the type of pain: (1) nonspecific lumbar pain (2): radicular back pain like the pain associated with LSS (3): lumbar pain associated with other spinal conditions and the patient who presents with 2 or 3 categories of pain are advised for MRI, CT and X-ray. The medical history of a patient includes a question about having any gastrointestinal or urinary problems, any gynecological issues, unexplained pyrexia or weight loss. In physical examination Lasègue test also known as the straight leg raise test (SLR) is performed. A positive SLR test indicates the lumbar disc herniation LDH [38]. To diagnose chronic lower back pain different tests are performed which include a blood test, bone scan, and discography. To evaluate problem related to the nerves of the legs and back electromyography and nerve conduction studies are performed. For

differential diagnosis MRI, CT and X-ray imaging is performed.

Treatment of LBP

Acute lower back pain normally gets better with some medications like analgesics, NSAIDS, muscles relaxants, topical pain relieving medications like creams, gels and sprays that lower the sensations of pain, heat or ice packs and gentle stretching exercises. CLBP treatment includes opioids, anticonvulsants [39] and antidepressant medication along with analgesics and NSAIDS. Hot and cold packs and some type and moderate exercise can be helpful. Alternative approaches like acupuncture, transcutaneous electrical nerve stimulation and spinal manipulation or mobilization may also be helpful. Advanced cases are treated with surgeries. Surgical approaches include vertebroplasty and kyphoplasty in case of the fractured vertebra, spinal laminectomy or spinal decompression [40], discectomy and microdiscectomy for removing the herniated disc [41] and plasma disc compression PDD [42].

DATD is a device that was invented and utilized over ten years to treat chronic conditions. In 2010 this device was registered as a class 1 medical device. TT and DATD is totally a new option for treatment and in U.S they received a patent as “therapeutic device and method”. This device consists of a belt and thermo elements. DATD comprises supporting apparel which resembles to a belt consisting of one or more thermo elements present in supporting pockets. These thermo elements comprise on a special type of mixture of waxes [45].

Treatment and relief from CLBP without the aid of any surgical techniques can be achieved by the use of thermos balancing therapy (TT). TT is an expression that is used to explain the working of DATD. This is the first-ever topical device that uses the energy reservoirs of the body to treat chronic disorders. This device is capable of restoring the damages even at capillary levels. It locally improves the circulation of blood when

applied to an effective region [9]. In disc degeneration (which is one of the causes of CLBP) the surrounding tissues swell up due to the increased number of capillaries for restoration of the disc. This swelling can cause pressure, tenderness, and immobility [40]. In addition to improving blood circulation DATD also reduces swelling [43]. It is used for a large time ranges from weeks to months. TT subsides pain of low back area and sciatica and is also effective for the treatment of prostate enlargement with zero side effects and is economical [8]. DATD has successfully been used since 2010 after being registered by the Medicines and Healthcare products Regulatory Agency (MHRA) [40].

It utilizes the natural heat of the body to treat chronic illnesses [43]. Thermo element present in this device accumulates the heat of the body and then become an energy source and spread this energy to the affected area or organ. The base of TT is a new study of the origin of the disease named the pathological activity of the capillaries according to which vascular factor plays a very important role in the etiology and pathophysiology of a chronic illness. As a result of all these alteration a hypothermic focus develops inside the affected tissue, which leads to the development of pressure and swelling in the organ which leads to the malfunction of this organ [44].

Cupping Therapy

Cupping is an alternative way of treatment with volitional engulfing of concoction and entering of fluid into the body. It just increases the blood flow to the sore area by applying suction and withdrawing the toxins and waste material from the area where a cup is placed and from the nearby area towards the outer surface so it can be eliminated from body by a minor cut [12, 13].

Cupping is one of the ancient ways of treatment used for curing multiple diseases. Cupping techniques vary throughout history and usually according to the geographical area by using

available materials such as bamboo, horns, metal, ceramic, glass and plastic. Cupping was practiced by Chinese, ancient Egyptian, Tibetan, Latin American cultures and Korean to relieve muscle tension, to reduce pain and improve blood flow.

Firstly, cupping therapy elaborated on a book (from 1550 BC) named Geord Eber's papyrus. In Asia, Ge Hong during the Jin dynasty used horns for suck body fluid. Greek bronze cups were applied for this therapy. Prophet Muhammad had been a practical user of cupping and also recommended this to his Ummah by saying it lightens weight and makes eyesight better. In Qanun Fi'l-Tibb (1025AC), the encyclopedia of medicine recommended cups for menstrual conditions. Galen put forward that cupping therapy eliminates toxins, and increases the flow of blood.

Different cupping techniques have been followed in ancient times. Chinese traditional wet cupping followed by two steps. Firstly sucking waste to the superficial surface and then scarification eliminating them from a body called as double S technique. By German scientist, reveals that wet cupping is an effective method for the treatment of carpal tunnel syndrome. Al-hijama followed by Arabian includes three steps. First suction then scarification followed by suction called triple S. According to Taibah mechani it is the prophet's remedy, efficient for cleaning the blood and interstitial fluid against toxic substances according to.

Al-hijama, Arabic wet-cupping, followed in many Arabic countries. It is also named as prophetic medicine [14, 15] and is considered more effective than Chinese traditional wet-cupping therapeutically [14, 15]. Al-hijama should be practiced in hospital for treating many diseases varying in pathogenesis and etiology. For curing thalassemia, Al-hijama is strongly suggested. It also decrease the serum ferritin. In short it is an excretory treatment to clean the blood of toxins or harmful substances such as

high serum ferritin and pathological wastes [16, 17] where wet-cupping based on pressure-dependent excretion as renal glomerulus filtration. In Al-hijama whole skin act like a kidney that cleans the blood directly and collect the pathological agents, noxious material, and wastes. In this way deeply cleans the tissues fluid, blood and intercellular fluid. It applies percutaneous pressure on the superficial vein and make blood and interstitial fluid clean from pathogenic materials [14, 15].

Although, it does not clean the blood deeply like a kidney but therapeutically crucial. By increasing the number of sucking cups the limit of this cleaning process is increased. According to Taibah theory Al-hijama is suitable for treating auto immune diseases by cleaning serum and interstitial fluid ferritin and ROS in thalassemia [18].

Various Types of Cups

Glass / fire glass cups
Horn/suctionwooden
Silicone/facial cups
Bamboo/wooden cups
Plastic Al-hijama cups
Nabhipump [18]

Cupping therapy should be followed on both healthy people for sake of getting young looks, rejuvenation, and for suffering patients. Cupping therapy helps in reducing localized pain such as knee pain, neck pain, headache and lower back pain. Cupping therapy also shows positive responses to many systematic illnesses such as rheumatoid, hypertension, arthritis, diabetes mellitus, heart diseases, infection and mental disorders [19, 20]. Skin diseases, musculoskeletal, respiratory, digestive disorders, and allergic condition even though reproductive problems can be treated by cupping therapy.

Procedure of cupping

Cupping is a simple method of stimulating muscles using quick, vigorous, and rhythmic strokes. It is especially helpful for treating aches

and pains caused by a variety of diseases. As a result, cupping has the potential to improve quality of life [14]. Each cupping session can be broken down into five steps and last about 20 minutes. Primary suction is included in the first step. The Therapist selects specific points or areas for cupping during this phase and disinfects the area. The therapist places a cup of the appropriate size on the chosen site and uses flame, electrical, or manual suction to extract air from the cup. The cup is then applied to the skin and left for three to five minutes. Puncturing or scarification is the second step. Surgical Scalpel Blade No. 2 is used to make superficial incisions in the skin [15-21], or puncturing with a plum-blossom needle, auto-lacing device, or needle [15]. The third step involves bloodletting and suction. The same method as before is used to reposition the cup on the skin for three to five minutes. The removal of the cup is the fourth step. The fifth step is dressing the area after cleaning it and disinfecting it with a skin disinfectant that has been approved by the FDA. In addition, appropriate-sized adhesive strips are then applied to the scarified area, where they remain for 48 hours [16]. It is important to know that wet cupping therapy focuses primarily on scarification and suction. There is a possibility that specific changes at the level of body cells, tissues, or organs are caused by each cupping method. The body's hormones may be increased or decreased, immunity may be increased or decreased, harmful substances may be eliminated from the body, and eventually the pain may be alleviated by specific interventions.

Conclusion

The use of cupping has proven to have therapeutic effects for LBP to some extent. Our literature review also has proven its effectiveness in treating many diseases. So it is used as a complementary treatment in the treatment of LBP. Therefore, wet cupping has been included as an effective remedy in the treatment of lower back pain. More extensive researches are required to explore other health benefits of cupping.

References

1. [https://my.clevelandclinic.org/health/Spine-Structure & Function: Parts & Segments, Spine Problem.](https://my.clevelandclinic.org/health/Spine-Structure-&-Function:Parts-&-Segments,Spine-Problem)
2. Vertebra, Vertebrae (Plural) Definition – Spine-health [https://www.spine-health.com/glossary/vertebra-vertebrae.](https://www.spine-health.com/glossary/vertebra-vertebrae)
3. Adrian C. Traeger, Amir Qaseem, James H. McAuley. Lower back pain. *JAMA*, 2021; 326(3): 286. doi:10.1001/jama.2020.19715
4. Joshua Scott, David C. Bury, John A. Miller. Martin Army Community Hospital, Fort Benning, Georgia. *Am Fam Physician*, 2018 Oct 1; 98(7): 421-428.
5. Gunvanti Rathod, Anita, Santosh Kumar, Pragnesh Parmar. Pancytopenia: Basic investigation to study common and uncommon etiology. *IAIM*, 2021; 8(6): 62-65.
6. Walker BF. The prevalence of low back pain: a systematic review of the literature from 1966 to 1998. *J Spinal Disord.*, 2000; 13: 205–17.
7. Papageorgiou AC, Croft PR, Ferry S, et al. Estimating the prevalence of low back pain in the general population. Evidence from the South Manchester Back Pain Survey. *Spine*, 1995; 20: 1889–94.
8. Bailey A. Risk factors for low back pain in women: still more questions to be answered. *Menopause*, 2009; 16: 3-4.
9. SG, Ling S, Hochberg MC, Resnick HE, Bandeen-Roche KJ, Won A, Guralnik JM. Widespread musculoskeletal pain and the progression of disability in older disabled women. *Ann Intern Med.*, 2001; 135: 1038-46.
10. Jiménez-Sánchez S, Fernández-de-las-Peñas C, Carrasco-Garrido P, Hernández-Barrera V, Alonso-Blanco C, Palacios-Ceña D, et al. Prevalence of chronic head, neck and low back pain and associated factors in women residing in the autonomous region of Madrid (Spain). *Gac Sanit.*, 2012; 26: 534–40.

11. Frymoyer JW, Pope MH, Clements JH, Wilder DG, McPherson B, Ashikaga T. Risk factors in low back pain: an epidemiological survey. *J Bone and Joint Surg.*, 1983; 65A: 213.
12. Abbasi K, Khan FS, Muhammad Akram, Rida Zainab, Abid Rashid, Shamaila Kausar, Bhagyashree Keshewani, Pragnesh Parmar, et al. Synthesis of Nanoparticles from Plant Extract. *Acta Scientific Microbiology*, 2022; 5(7): 29-35.
13. Parmar P, Rathod G. Art of Parenting vs Parental Child Abuse – Choose a Right Path. *International Journal of Medical Justice*, 2023; 1(1): 23-26.
14. Luis Roberto Vialle, Emiliano Neves Vialle, Juan Esteban Suárez Henao, Gustavo Giraldo, lumbar disc herniation, 2010; 45(1): 17-22.
15. Schoenfeld AJ, Weiner BK. Treatment of lumbar disc herniation: Evidence-based practice. *Int J Gen Med.*, 2010 Jul 21; 3: 209-14.
16. Dydyk AM, Ngnitewe Massa R, Mesfin FB. StatPearls [Internet]. StatPearls Publishing; Treasure Island (FL): Jul 12, 2021. Disc Herniation. [PubMed]
17. Curtis L, Shah N, Padalia D. Facet Joint Disease. StatPearls 2020 Apr 20. Available: <https://www.ncbi.nlm.nih.gov/books/NBK541049/> (accessed 15.6.2021)
18. Rathod G, Parmar P. Barcode system – A boon for evidence based laboratory medicine (EBLM). *IP Archives of Cytology and Histopathology Research*, 2022; 7(2): 147-148.
19. Varlotta GP, Lefkowitz TR, Schweitzer M, Errico TJ, Spivak J, Bendo JA, Rybak L. The lumbar facet joint: a review of current knowledge: part 1: anatomy, biomechanics, and grading. *Skeletal Radiol.*, 2011 Jan; 40(1): 13-23.
20. Manchikanti L, Singh V, Pampati V, et al. Evaluation of the relative contributions of various structures in chronic low back pain. *Pain Physician*, 2001; 4(4): 308–316.
21. Perolat R, Kastler A, Nicot B, et al. Facet joint syndrome: from diagnosis to interventional management. *Insights Imaging*, 2018; 9(5): 773–789.
22. Parikh S, Gadani Z, Maru A, Dalal DK, Parmar P, Rathod G. A study of young adult onset seizures with special reference to MRI findings. *International Journal of Life Sciences Biotechnology and Pharma Research*, 2023; 12(2): 315-319.
23. Tang C, Moser FG, Reveille J, Bruckel J, Weisman MH. Cauda Equina Syndrome in Ankylosing Spondylitis: Challenges in Diagnosis, Management, and Pathogenesis. *J Rheumatol.*, 2019 Dec; 46(12): 1582-1588.
24. Glassman DM, Magnusson E, Agel J, Bellabarba C, Bransford RJ. The impact of stenosis and translation on spinal cord injuries in traumatic cervical facet dislocations. *Spine J.*, 2019 Apr; 19(4): 687-694.
25. Spinal Stenosis: Who Gets It? National Institute of Arthritis and Musculoskeletal and Skin Diseases, National Institutes of Health Website. <https://www.niams.nih.gov/health-topics/spinal-stenosis>. Accessed September 23, 2019.
26. Tahreem Riaz, Muhammad Akram, Abid Rashid, et al. Role of nanoparticles in disease management. *IAIM*, 2023; 10(8): 22-29.
27. Majid K. Pathophysiology, clinical presentation, natural history, and review of the SPORT trials. *Seminars in Spine Surgery*. 2013; 25(4): 228-33. doi: 10.1053/j.semss.2013.05.002
28. Randall RM, Silverstein M, Goodwin R. Review of Pediatric Spondylolysis and Spondylolisthesis. *Sports Med Arthrosc Rev.*, 2016 Dec; 24(4): 184-187.

29. Randall RM, Silverstein M, Goodwin R. Review of Pediatric Spondylolysis and Spondylolisthesis. *Sports Med Arthrosc Rev.*, 2016 Dec; 24(4): 184-187.
30. Frymoyer JW. Degenerative spondylolisthesis: diagnosis and treatment. *J Am Acad Orthop Surg.*, 1994; 2: 9-15.
31. Marawar SV. The radiographic parameters for the prediction of spondylolysis and spondylolisthesis. *Semin Spine Surg.*, 2014; 26: 219-224.
32. Jones TR, Rao RD. Adult isthmic spondylolisthesis. *J Am Acad Orthop Surg.*, 2009; 17: 609-617.
33. Vibert BT, Sliva CD, Herkowitz HN. Treatment of Instability and Spondylolisthesis: Surgical versus Nonsurgical Treatment. *Clin Orthop Relat Res.*, 2006; 443: 222-227.
34. Meyerding H. Low backache and sciatic pain associated with spondylolisthesis and protruded intervertebral disc: incidence, significance, and treatment. *J Bone Joint Surg Am.*, 1941; 23: 461-470.
35. Steven Tenny, Christopher C. Gillis. Tenny S, Gillis CC. Spondylolisthesis. [Updated 2021 Jul 25].
36. Jones LD, Pandit H, Lavy C. Back pain in the elderly: a review. *Maturitas.*, 2014; 78: 258-62.
37. Ropper AE, Cahill KS, Hanna JW, McCarthy EF, Gokaslan ZL, Chi JH. Primary vertebral tumors: a review of epidemiologic, histological and imaging findings, part II: locally aggressive and malignant tumors. *Neurosurgery*, 2012; 70: 211-9.
38. Wong AY, Samartzis D. Low back pain in older adults - the need for specific outcome and psychometric tools. *J Pain Research*, 2016; 9: 989-91.
39. AGS Panel on Persistent Pain in Older Persons. The management of persistent pain in older persons. *J Am Geriatr Soc.*, 2002; 50: S205-24.
40. Smith ZA, Fessler RG. Paradigm changes in spine surgery: evolution of minimally invasive techniques. *Nat Rev Neurol.*, 2012; 8: 443-50.
41. Gibson JNA, Waddell G. Surgical interventions for lumbar disc prolapse: updated Cochrane Review. *Spine*, 2007; 32: 1735-47.
42. Gibson JNA, Waddell G. Surgery for degenerative lumbar spondylosis: updated Cochrane Review. *Spine*, 2005; 30: 2312-20.
43. Allen S, Adjani, A. Therapeutic Device and Method, United States Patent and Trademark Office. U.S. Patent 9,408,744 B2, 9 August 2016. Available online: <https://www.google.com/patents/US9408744> (accessed on 1 June 2018).
44. Allen, S. The Origin of Chronic Diseases Can Be in Capillary Pathology: An Evidence from Clinical Trials on Thermobalancing Treatment of Prostate Reveals. *Achievements in the Life Sciences*, 2016; 10(2): 197-202. doi:10.1016/j.als.2016.11.005
45. Allen S, Adjani A. Benign Prostatic Hyperplasia Treatment with New Physiotherapeutic Device. *Urol J.*, 2015; 12(5): 2371-6.