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### RESEARCH ARTICLE

#### EFFECT OF LIVER MOBILITY AND MOTILITY IN CASE OF NON SPECIFIC RIGHT SHOULDER PAIN WITH MILD RESTRICTION OF MOVEMENT

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#### Abstract

**Background:** Shoulder pain is a common musculoskeletal condition that is recognized as a disabling problem and can be associated with substantial economic burden. The pain and disabilities associated with shoulder pain can have a large impact on individuals and their families, communities, and healthcare system affecting daily functioning, and ability to work. It is the third most common musculoskeletal complaint presenting to physical therapy.

**Objective:** Reducing the non specific right shoulder pain and improve the range of motion using an osteopathic approach.

**Methods:** The study was done on two patients aiming to reduce their right shoulder pain and mild restriction of shoulder rotation movement, we use visceral manipulation technique especially liver technique using liver for investigation and treatment purpose.

**Results:** We found reduce the pain and improve range of movement of right shoulder after 15 min with the visceral manipulation techniques the approach is done for three times a week for two months.

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#### Introduction:-

Shoulder joint is a complex joint consisting of glenohumeral, acromioclavicular, sternoclavicular, scapulothoracic and the articulation between coracoacromial arch and greater tuberosity. Glenoid cavity is a part of a larger sphere with the angular value of about 75 degree, where head of humerus is almost half of a smaller sphere with angular about 150 degree. The incidence of shoulder pain in community settings is high, estimated to be 11.2 per 1000 person-years. The liver is covered by the diaphragm that separates it from the lungs. The pain from diaphragm can go to the right shoulder. Some time there may be pus or blood that collect between the liver and the diaphragm and this then may produce right shoulder pain. Gallstone are one of the most common medical problem. they can cause acute or chronic cholecystitis and result in surgery. Some time there may be pain radiating to the right scapula region and right shoulder together with right upper quadrant pain in these patient. It is therefore important to obtain a detail history from patients presenting with shoulder pain and determine treatment after pinpoint the underlying disorder by taking the physical examination findings, lab test, result and the result of any consultation are necessary in to account. We aimed to evaluate whether there was underlying gallbladder-related pathology in patient presenting to orthopedic out patient with right shoulder pain in this study. This type of patient during physical examination not shows any local tenderness of right shoulder joint. Because pain is not due to local region, it is due to visceral organ. Usually, if you have a shoulder problem like a pulled muscle or osteoarthritis, moving the shoulder may make the pain better or worse. But if you have referred shoulder pain, you won't feel any difference if you move

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the shoulder. Innervation of liver and right shoulder is same, and phrenic nerve(Motor Nerve) innervate the shoulder capsule, diaphragm, and both layer of peritoneum (parietal and visceral).

Osteopathy has developed into osteopathic medicine, now encompassing the appropriate use of pharmaceuticals, Osteopathic medical practitioners follow accepted methods of physical diagnosis and surgical diagnosis and treatment, including additional training in the evaluation and treatment of the neuromusculoskeletal system, osteopathic medicine still has its roots deeply seeded in four general principles(5).

**Case Representation:**

Two patients came to us both are having shoulder pain without any local tenderness and patient having no history of trauma. Patient taken some medicine for abdominal pain due to liver problem.

**Method for Treatment:**

The liver is a heavy organ weighing on average between 1-2.5kg (2- 5.5lbs). Highly vascularized on as much as 1.5 liters of blood per minute passes through it. The liver serving as a vehicle for discharging strong emotions. The right triangular ligament, coronary ligament and left triangular ligament connect to the diaphragm. The falciform ligament it divides the liver into right and left lobe which is connected to the anterior abdominal wall and diaphragm. Organ can have sliding surface allowing them to articulate one with the other. A ligament support system attaching them to back body wall.

In the visceral manipulation technique apply only 15 minutes for two times a week for 1 month as follows:

1. Initially check the shoulder movement for observe the barrier (flexion, extension, internal rotation, external rotation) Then apply the motility technique of liver very gently. After apply the technique see the response. Place one hand over the poster-lateral part of the chest at 4th and 5th intercostal space and other hand anterior superomedial aspect of the chest at 5<sup>th</sup> and 6<sup>th</sup> intercostal space. Then feel the movement of the liver and observe the direction of restriction, After assess the movement apply the assistance medial posterior lat and inferior direction.
2. Second approach liver mobility through direct subcostal approach to the liver pushing the central part of liver posterior superior it should move 2 cm in the direction of push This manipulate hepatorenal ligament by applying the same push towards the opposite direction of the trunk bending will manipulate right and left triangular ligament and also lifting the inferior border of liver with sudden fall will manipulate the coronary ligament.
3. Then assess the pyloric sphincter for observe the pattern clockwise, anticlockwise motion or frozen sphincter. After assessment I found sphincter of oddi is anticlockwise motion than correct this dysfunction.

**Result:-**

Before apply the treatment technique the chief complaint of patient is shoulder pain with mild stiffness. But after four initial settings of treatment, patient feel 30% better in pain and improve the range of motion. Progressively after eight visits the symptoms of shoulder pain reduce 70% and stiffness reduce about 80%.

**Discussion:-**

Visceral motility is the movement of the viscera in response to external forces. Voluntary movement, or involuntary movement, such as diaphragm with respiration of the heart beating, creates the use external forces that push and pull on the viscera. There are a few basic concepts about visceral manipulation. All organs have motility and mobility. The mobility of an organ is the way it moves—a mechanical concept.

The viscera have an intrinsic active motion which we call motility. Visceral motility is perceptible to the hand but requires an educated sense of touch. It is kinetic expression of tissue in motion. For the most part, when assessing the viscera, each organ moves in phases towards and away from the axis of body. Expir is the movement of an organ closer to the median axis and inspire is the movement of an organ away from it.

When applying visceral manipulation, initially started by general listening and local listening. This is where, in a matter of seconds, an assessment is made as to where the body is asking for attention once the fix the patient problem use the any other technique which is suitable for the patient like motility, mobility or any organ specific approach.

After proper physical assessment of patient apply the direct approach, indirect approach and correct the pattern of abdomen sphincter .Depending on the patient history and physical findings, the physician may choose to introduce forces in any of the above styles(3). The rational for implementing these relates to the measure components of the dysfunction and the principal being utilized to attain the most significant improvement (5). Direct approach means treat the affected part directly through the motility method . Indirect approach means release the fascia around the affected organ .

“A system of diagnosis and treatment directed to the viscera to improve physiologic function; typically the viscera are moved toward there fascial attachments to a point of fascial balance; also called ventral techniques.”

**Conclusion:-**

In this study concluded that visceral manipulation technique can improve the joint range and reduce the pain within two months for three times a week.

**Refrences:-**

1. Ward R. Foundations for osteopathic . Philadelphia, PA..Lippincott Williams and Wilkins, 2003.
2. Barral JP, Mercier P. Visceral manipulation. Seattle ,WA..Eastland 1988
3. Visceral Techniques: P-472, Atlas of Osteopathic Techniques,2<sup>nd</sup> edition, Alexander S. Nicholas, Evan A. Nicholas.
4. Effect of visceral Manipulation on liver enzymes on a child with cerebral palsy –Yousef salah salem-
5. Barral JP. Visceral Manipulation II. Seattle, WA; Eastland Press 1989
6. Sefinger MA, King HH, Ward RC, et al. Osteopathic Philosophy. In: Foundation for osteopathic Medicine,2<sup>nd</sup> ed, Ward RC, Jerome JA.