

Osteopathic Visceral Manipulation on Overall Health

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May 14, 2023

INTRODUCTION

This paper will present Osteopathic philosophy and how Visceral Manipulation plays an important role to human's overall health.

I will present the abdominal organs' anatomy, functions, articulations with surrounding organs, and causes of organ dysfunctions. Different manipulation techniques will also be presented, as well as some case histories of my patients and how I changed their lives through visceral manipulation.

OSTEOPATHIC PRINCIPLES

According to Dr. Andrew Taylor Still, the human body is one entity, indivisible, reflecting the concept of body unity. The body is described using the analogy of a clock that is composed of multiple cogwheels, each possessing their own specific rhythm and movement, all coordinating with one another. Therefore, the malfunction of a single cogwheel will affect the overall movement of the clock.

Dr. Still, who is regarded as the founder of Osteopathy, established the concept of manual medicine based fundamentally on the treatment of the musculoskeletal system: the role of the Osteopath is to test, then normalize, all articulations of the body. Vertebral manipulations constitute an important aspect of osteopathic treatment and are not simply limited to the listening and treatment of the fascial system. The vertebral approach is essential for Osteopaths, and this belief may stem from the principle of neurophysiology developed by Irvin Korr, "The Physiological Basis of Osteopathic Medicine".

Osteopathic philosophy emphasizes in the principles that the human being is a dynamic unit of function; the body possesses self-regulatory mechanisms that are self-healing in nature; and structure and function are interrelated at all levels.

Structure and function concepts of the myofascial and articular portions of the musculoskeletal system are inherent to understanding osteopathic diagnosis and therapeutic techniques. Barriers are also important concept in the understanding and application of osteopathic techniques. Various barriers such as physiologic barriers, elastic barriers, restrictive barriers, and pathologic barriers, which all causes visceral mobility restrictions. These restrictions may become the source of vertebral dysfunction at their corresponding spinal level, following the same mechanism as nociceptive facilitated segments.

Treatment of musculoskeletal, cranial, and visceral systems is indissociable for Osteopaths, and defines a holistic manual medicine approach.

WHAT IS VISCERAL MANIPULATION

The word “Visceral” means the soft internal organs of the body. The word “manipulation” means “to handle and move a body part, either as an examination or for a therapeutic purpose”, according to Wiktionary.

Visceral manipulation is a hands-on therapy with the specific goal of encouraging normal tone and movements both within and between internal organs, their connective tissues, and other structures of the body where normal motion has been impaired. Additionally, other factors affecting the body may be addressed, such as tensions in the fascia (connective tissue), nerves, and blood vessels, as well as emotional issues. The ultimate goal of visceral manipulation is to allow the body to self-correct, leading to improved health and optimal body function.

Visceral manipulation is based on the premise that movement is essential for life and any restriction or any decrease in motion will affect our health. For an organ to be healthy and have optimal function, there needs to be motion. Movement is transmitted between organs and other structures of the body through a thin layer of connective tissue, called fascia.

According to Jean-Pierre Barral, Visceral Manipulation is a manual therapy consisting of gentle, specifically placed manual forces that encourage normal mobility, tone and inherent tissue motion of the viscera, their connective tissue and other areas of the body where physiologic motion has been impaired.

Motion is a sign of life and essential in the universe. Everything moves in space and time and humans are no exception. Our bodies need movement to be healthy. This same principle applies to every structure in our bodies including the viscera. For an organ to be healthy and have optimal function there needs to be motion.

ORGANS OF THE VISCERA AND THEIR ARTICULATIONS

LIVER

The Liver is the largest digestive gland in the body. Its functions are highly diverse including: metabolism, the synthesis and storage of nutrients, detoxification, balancing hormonal levels, heat production and the synthesis and secretion of bile.

Liver articulates with the right triangular ligament, coronary ligament, and left triangular ligament that connects to the diaphragm. It articulates with falciform ligament that connects to anterior abdominal wall and diaphragm, hepatocolic ligament to hepatic flexure of large intestine, hepatorenal ligament to right kidney. It also articulates with lesser omentum to the duodenum, stomach, abdominal portion of esophagus, and associated with common bile duct, hepatic artery, and portal vein. Because of its articulation with the diaphragm, it can also affect the lungs, pleura, and pericardium of the heart.

GALLBLADDER

The gallbladder's function is to store and concentrate bile. During digestion, the gallbladder contracts and bile passes through the bile ducts into the duodenum. Bile salts emulsify the fats which allows the enzyme lipase, coming from the pancreas, to more readily digest them.

The gallbladder is an organ that has a role of accepting overflow in all senses of the word. It is a primary organ for somatization of emotional and mental stress. The gallbladder is the first organ to contract if a person is upset upon receiving bad news or witnessing an accident.

The gallbladder sits within the right quadrate lobe of the liver. Occasionally may even be connected to the liver by a short mesentery. The anterior projection of fundus is beyond the liver and relates to the 9th right costal cartilage. The cystic duct and the common bile duct travel within the lesser omentum (hepatoduodenal ligament). The inferior surface of the gallbladder connects to cystocolic ligament with the right part of the transverse colon. The cystoduodenal ligament connects the inferior surface of the gallbladder with the superior part of the duodenum (D1).

STOMACH

The stomach is the site of both chemical and mechanical digestion. Chemically, the enzyme pepsin converts protein from the food we eat into polypeptides. Mechanically, the stomach has three layers of smooth muscle that act as a churn during digestion. Gastric juice secreted from glands in the gastric mucosa, along with this churning action liquefy the contents in the stomach to chyme.

The stomach articulates with gastro-phrenic ligament (an extension of coronary ligament) connects the fundus of the stomach to the diaphragm. The lesser omentum, comprised of the hepatogastric and hepatoduodenal ligaments connect to lesser curvature of the stomach to the liver and duodenum. The hepatoduodenal ligament encases the common bile duct, hepatic artery and portal vein. The greater omentum connects the stomach with transverse colon. The gastrosplenic ligament (an extension of greater omentum) connects the stomach to the spleen. Posteriorly, stomach articulates with pancreas, spleen, left kidney, left adrenal gland, duodenojejunal flexure and left colic flexure. Due to articulation with the diaphragm, there is a relationship with stomach and pericardium, heart, left pleura and left lung. In cases of stomach ptosis, there may be relationship with the loops of small intestine and bladder.

PANCREAS

The pancreas has two aspects: the Exocrine and Endocrine aspects.

The exocrine aspect discharges digestive fluids into the duodenum and is associated with the liver. The exocrine aspect creates enzymes that are alkaline and that breakdown proteins,

starches, fats, and also neutralize stomach acids. These enzymes go directly through the pancreatic duct.

The endocrine aspect of the pancreas takes place in the small clusters of cells that secrete hormones, insulin and glucagon into the bloodstream. Insulin enables cells to take in and use glucose from the blood. This is our main fuel for the blood cells. Glucagon causes the liver to release glucose into the blood stream when we need it.

The pancreas has several articulations. The head of the pancreas is embraced by the curve of the duodenum. Anterior to the body and tail of the pancreas is the stomach. The body of the pancreas is covered with peritoneum, where it provides the attachment for the transverse mesocolon. Superiorly, the body of pancreas articulates with the posterior surface of the lesser omentum. Posterior to the body of the pancreas, it articulates with the left kidney and suprarenal gland. The tail of the pancreas, its narrow-left end, is contained within the splenorenal ligament and connects via this ligament to the hilum of the spleen. Several vessels pass at the posterior of the pancreas such as aorta, inferior vena cava, renal veins, common bile duct and the portal vein.

SPLEEN

The spleen is a soft vascular organ that lies against the diaphragm between the 9th and 11th ribs. It is the least resistant of the glandular organs and can rupture easily. It is not a digestive organ. It is considered a secondary lymphoid organ and plays important role in the immune system. The spleen filters blood, removes iron from hemoglobin, produces lymphocytes and antibodies, and stores and releases blood with high concentration of corpuscles (RBC).

The spleen is difficult to describe in terms of size because it is so variable. It is located in the upper left quadrant of the abdomen between the fundus of the stomach and the respiratory diaphragm.

The spleen articulates with the diaphragm laterally, posteriorly, and superiorly. The spleen is in contact with the posterior wall of the stomach. The greater curvature of the stomach connects to the spleen via the gastrosplenic ligament. The spleen connects to the lateral part of the anterior surface of the left kidney via the splenorenal ligament. Encased with lineo-renal ligament is the tail of the pancreas. Inferiorly, the spleen articulates with the colic flexure via the phrenicocolic ligament.

SMALL INTESTINE

The small intestine is responsible for the chemical digestion of food. It is where most of the absorption of nutrient materials takes place. The small intestine has three parts: duodenum, jejunum, and ileum.

The duodenum is the first part of the small intestine. It is centrally located within the abdominal cavity and because of this has direct contact with almost every abdominal organ. In the small

intestine, the chemical digestion of food is completed and most of the absorption of nutrient materials takes place. The duodenum is retroperitoneal, found deep within the abdomen at the posterior abdominal wall by the parietal peritoneum. It is 25 cm long and curves around the head of the pancreas. The duodenum is the site where both bile and pancreatic juice enters the gastrointestinal tract. The contents enter into the duodenum at the sphincter of Oddi, located in the second portion of the duodenum. The common bile duct carries the bile from the liver via the gallbladder and the pancreatic duct carries the pancreatic juice.

The duodenum can be divided into four areas of articulation, namely D1, D2, D3, and D4. It articulates anteriorly, posteriorly, superiorly, inferiorly, medially, and laterally in these areas. For D1: It articulates anteriorly with the peritoneum, gallbladder, lobe of the liver; posteriorly at the bile duct, portal vein and inferior vena cava; superiorly at the neck of the gallbladder; and inferiorly at the pancreas. For D2: It articulates anteriorly at the transverse colon, transverse mesocolon and some loops of small intestine; posteriorly at the right kidney, renal vessels, ureter and right psoas muscle; medially at the head of pancreas, pancreatic duct and common bile duct; laterally at the right hepatic flexure of colon and ascending colon. For D3: It articulates anteriorly at the loops of jejunum and mesenteric root of small intestine; posteriorly at the psoas muscle, inferior vena cava, aorta, ureter and the testicular/ ovarian vessels; superiorly at the pancreas. For D4: It articulates anteriorly at the root of the mesentery, stomach and loops of jejunum; posteriorly at the left psoas and left renal vessels; and superiorly at the transverse mesocolon, transverse colon and the ligament of Treitz.

The jejunum and ileum absorb nutrients, water and completes the chemical digestion of carbohydrates, proteins and fats. The jejunoileum extends from the duodenojejunal flexure to the ileocecal valve where it transitions into the first part of the large intestine. We often refer jejunoileum as the small intestine although in theory it is the duodenum, jejunum and ileum combined that make up the small intestine. Being attached to a mesentery, the jejunoileum is designed to be an extremely mobile structure. Any restriction caused by fibrosis, adhesions, intestinal spasms, etc., will create abnormal tension, decreasing the normal motion of the small intestine and thereby comprising the rate of the blood flow in the area.

Anteriorly, the jejunoileum relates to the greater omentum (which covers the jejunoileum). Superiorly, it relates to the transverse colon and its mesocolon. Posteriorly to the jejunoileum loops are the posterior abdominal wall, duodenum, kidneys, ureters, ascending colon and descending colon. Inferiorly, the jejunoileum relates to the pelvic organs particularly the bladder. The jejunoileum loops articulate with each other. There is a sliding surface between each loop of small intestine.

The blood flow for the small intestine is considerable and many functional problems can result from poor digestive circulation.

LARGE INTESTINE

The large intestine absorbs water and electrolytes. Some vitamins and drugs are also absorbed into the blood capillaries from the large intestine. It spans about 1.5 meters from the cecum to the

sigmoid colon. Bordering the abdominal cavity, it is found in the pelvic regions and travels as high as the diaphragm with connections to the liver and the spleen. It comes into contact with many structures including the sacroiliac joints, urogenital organs, iliac vessels, kidneys, duodenum, liver, stomach, pancreas, spleen and small intestine. If restricted, the large intestine can have an effect on the above organs and their related nerves, blood vessels, etc.

Large intestine is composed of cecum, ascending colon, hepatic flexure, transverse colon, splenic flexure, descending colon, and sigmoid colon.

The Cecum is in contact with abdominal wall, greater omentum, intestinal loops, parietal peritoneum, psoas muscle, iliacus muscle, genitofemoral nerve, femoral nerve and lateral femoral cutaneous nerve.

The Ascending colon is in contact with abdominal wall, peritoneum, Toldt's fascia, inferior pole of the right kidney, descending duodenum (D2), right ureter, spermatic or utero-ovarian vessels, intestinal loops, and diaphragm.

The hepatic flexure is in relationship to the diaphragm, right kidney, duodenum, gallbladder, and liver.

The transverse colon is in relationship to the mesocolon connecting it to the posterior abdominal wall which connects with the greater omentum and pancreas. It is laterally in contact with the liver and the greater curvature of the stomach up to the spleen; posteriorly it is over the right kidney and D2/D3/D4 and jejunoileum loops and left kidney.

The splenic flexure is in relationship to the descending colon (due to its acute angle), and lateral end of spleen, tail of pancreas and the left kidney, diaphragm, and lateral abdominal wall.

The descending colon is in contact with the following structures: Loops of jejunum, abdominal wall, Toldt's fascia, iliacus and psoas muscles, iliohypogastric, ilioinguinal, femoral and genitofemoral nerves, testicular/ ovarian vessels and lateral border of left kidney.

The sigmoid colon is in contact with the following structures: Sigmoid mesocolon, jejunoileum loops, iliac fascia, Toldt's fascia, external iliac vessels, left sacral plexus, left ureter, left piriformis, psoas muscles, bladder, uterus, obturator nerve, ovary and ductus deferens.

UTERUS

The uterus is a thick-walled, hollow muscular organ that is somewhat pear shaped. It is 7-8 cm long and 2-3 cm thick. The body and cervix of the uterus is divided by a slight constriction known as the isthmus. It has three layers namely: endometrium (inner mucous coat), myometrium (middle smooth muscle layer), and perimetrium (out serous layer).

Position of the uterus can be anteverted or anteflexed, tilted, bent forward overhanging the bladder separated by the vesico-uterine pouch and posteriorly from the rectum by the pouch of Douglas.

The principal ligaments of the uterus are the broad ligaments, round ligaments, uterosacral ligaments and the cardinal ligaments. Due to frequent physiologic changes required of this reproductive system, certain peritoneal folds are also considered ligaments.

The round ligament is attached anteroinferiorly to the uterotubal junction, running between layers of the broad ligament through the deep inguinal ring to insert on the labia majora. The broad ligament encloses the body of the uterus allowing the uterus to rise and incline posteriorly when the bladder is full. The transverse cervical ligaments (cardinal or otherwise known as Mackenrodt's ligaments) extend from the cervix to the lateral walls of the pelvis. Uterosacral ligaments pass from the sides of the cervix toward the sacrum superior to the levator ani muscles and can be palpated through the rectum as they pass along the sides of the rectum.

The major supports for the uterus are the levator ani, coccygeus and muscles of the urogenital diaphragm. Blood supply is from the uterine arteries which are branches of the internal iliac arteries and the ovarian arteries. It is innervated by the inferior hypogastric plexus, which lies in the broad ligament with sympathetic, parasympathetic, and afferent fibers.

OVARIES

The ovaries are a grayish-pink color, can be smooth or uneven at its surface, weigh 2 to 3 grams and lie in a shallow pelvic depression called the ovarian fossa.

The uterine tubes convey the ova from the ovaries to the inner wall of the uterus. Each tube is suspended by a mesenteric peritoneal fold called the mesosalpinx. Each tube is 10 cm long and is directed laterally, superiorly and inferiorly at its distal end.

The ovaries are suspended by the broad ligament, the ligament of the ovary and the suspensory ligament of the ovary, which passes over the psoas muscle. Its glands are 3cm long, 1.5 cm wide and 1 cm thick. Ovarian ligaments attach posterolaterally to the uterotubal junction, and continues posterolaterally to meet and support the ovarian pelvic fossa. Fallopian tubes ducts ten to twelve cm long and 1 cm in diameter within the upper part of the broad ligament, where its blood supply is from the uterine and ovarian arteries.

PROSTATE

The prostate is the largest accessory gland of the male reproductive system. The firm, walnut-size prostate surrounds the prostatic urethra. The glandular part makes up approximately two-thirds of the prostate.

The fibrous capsule of the prostate is dense and neurovascular, incorporating the prostate plexuses of veins and nerves. All this is surrounded by the visceral layer of the pelvic fascia, forming a fibrous sheath that is thin anteriorly, continuous anterolaterally with the puboprostatic ligaments, and dense posteriorly where it blends with the rectovesical septum.

The prostate has a base that articulates to the neck of the bladder. Its apex articulates with the fascia on the superior aspect of the urethral sphincter and deep perineal muscles. The posterior surface of the prostate articulates with the ampulla of the rectum. Inferiolateral surfaces that are related to the levator ani.

BLADDER

The bladder is a vesicle or muscular sac for urine storage. It is separated from the pubic bone by the retropubic space and from the uterus by the vesicouterine pouch. Bladder rests on the pelvic diaphragm and anchored by the pubovesical ligaments at the bladder neck. The entire organ is enveloped by areolar tissue called vesicle fascia.

Wall of the bladder is composed of smooth muscle called the detrusor muscle which consists of three layers running in longitudinal and circular directions. At the neck of the bladder these muscular layers form the internal sphincter of the bladder.

Blood supply includes superior vesical, inferior vesical, uterine and vaginal arteries. Bladder innervation is from the pelvic splanchnic nerves (parasympathetic) which are motor to the detrusor and inhibitory to the internal sphincter, the sympathetic fibers to the bladder are from T11 to L2 and the inhibitory to the bladder, and sensory fibers are visceral and transmit pain sensations from the vesicle nerve plexus continuous with the inferior hypogastric plexus.

KIDNEYS

The kidneys are of particular importance in Visceral Manipulation. They are “key organs”. Renal disorders have wide repercussions. Etiology of kidney dysfunction can be metabolic, emotional or mechanical. Mechanical functioning is of great importance because a fixed kidney is pathological. One of the visceral work principles is that mobility is of greater significance than position. The primary mechanical pathology of the kidney is ptosis (or prolapse).

Not all are aware of the magnitude of renal metabolic activity. The kidneys take up 1/140th of the body's weight and utilize 1/8th of the body's oxygen. The kidneys, along with the liver, play a significant role in detoxifying our bodies. The kidneys (and liver) are also responsible for the deep energies of our body. Indeed, the kidney-liver relationship is so strong that liver dysfunctions are generally an indication for treatment of the kidneys.

The kidneys articulations with the following: the right lobe of the liver articulates with the right kidney via the hepatorenal ligament; the adrenal glands sit on the superior medial aspect of each kidney; the hepatic flexure of the colon articulates with the right kidney; the descending

duodenum (D2) articulates with the hilum of the right kidney; the left kidney articulates with the stomach; the middle part of the anterior left kidney articulates with the pancreas; the inferior part of the left kidney articulates with the duodenojejunal flexure and loops of the jejunum; on the lateral aspect of the left kidney is the splenic flexure of the colon; articulation with the spleen and the left kidney via the splenorenal ligament or lienorenal ligament.

HEART

The heart is relatively small, roughly the same size as your closed fist. It is about 12 cm long, 9cm wide and 6 cm thick, with an average mass of 250g in adult females and 300 g in adult male. The heart rest on the diaphragm, near the midline of the thoracic cavity. The heart lies in the mediastinum, an anatomical region that extends from the sternum to the vertebral column, from the 1st rib to the diaphragm, and between the lungs.

The heart is free and unattached to surrounding organs. Its stability comes from the pericardium and the continuity of the blood vessels.

LUNGS

The lungs are paired cone-shaped organs in the thoracic cavity. They are separated from each other by the heart and other structures of the mediastinum, which divides the thoracic cavity into two anatomically distinct chambers. Left lung which has 2 lobes, is about 10% smaller in size to accommodate the heart, which is about 550 grams in weight, while the right lung with 3 lobes is about 600 grams in weight.

Each lung is enclosed and protected by a double-layered serous membrane called the pleural membrane. The superficial layer is called the parietal pleura attaches to the chest wall and the diaphragm. The deep layer is called the visceral pleura which covers the lungs themselves.

The lungs extend from the diaphragm to just slightly superior to the clavicles and lie against the ribs anteriorly and posteriorly. Medially, the left lung also contains a concavity, the cardiac notch, in which the apex of the heart lies. Although the right lung is thicker and broader, it also somewhat shorter than the left lung because the diaphragm is higher on the right side, accommodating the liver that lies inferior to it. The apex of the lungs lies superior to the medial third of the clavicles, and this is the only area that can be palpated.

TECHNIQUES IN VISCERAL MANIPULATIONS

Techniques in Visceral Manipulations are based on how to improve the movement of the organs within the viscera. All organs are subject to numerous types of movement patterns that can be divided into three categories: mobility, motricity, and motility.

MOBILITY

Mobility consists of passive movements linked to motor activities of the musculoskeletal system (diaphragm, abdominal muscles, etc). These movements are observed while breathing or during activities of daily living: walking, expression through talking or hand gestures, and trunk or lower extremity range of motion. This is simply described as the push and pull of the surrounding tissues, and how the organ is able to move and accommodate these stresses.

The abdomen may generally be regarded as a cofferdam due to the nature of its contents; although viscera are malleable, they can only tolerate minimal compression, Trunk range of motion will elicit passive movements of adjacent organs altering their anatomical relationships. This passive movement between two organs, when restricted due to pathology (adhesion, fibrosis, etc), may trigger nociceptive impulses that will greatly influence the amplitude of the trunk's range of motion. Thus, during voluntary trunk active range of motion, multiple small passive movements occur between viscera. Mobility is an essential component of visceral movement and vice versa.

An additional factor influencing visceral mobility is movement in response to the autonomic nervous system activation. This is illustrated through the vital functions of respiratory and cardiovascular activity.

For the viscera to function properly, each organ needs to be able to glide and slide in relationship to all the other tissues without any restriction. A restriction, fixation or adhesion to another structure, no matter how small, implies functional impairment of the organ.

MOTRICITY

Motricity is the movement induced by contraction of muscle fibers present within each organ's tissue. The quantity of muscle fibers, as well as the intensity of movement, varies from one organ to another. Viscera producing peristalsis demonstrate greater amplitude of movement, which is induced and controlled involuntarily by the autonomic nervous system.

Distinct peristaltic movements awaken each organ and produce significant waves of contractions meant to shake, stir, and propel the visceral content. Waves associated with hollow organs are dependent upon the nervous and hormonal systems.

MOTILITY

Motility is an intrinsic movement within each organ. This motion has been empirically validated by comparing the manual palpation of several therapists. This movement takes place without any external factors involved. Inherently, the viscus mobilizes itself of its own volition, slowly, and with small amplitude, motion that has not been able to be detected by current medical imaging. Good motility and functioning of an organ reflect its "good health".

Motility is a rhythmic motion to allow fluids to move through the organ, to allow nutrients to be carried into your tissues, and to move waste products away from your tissues. Motility can be affected by a restriction of the organ or tissues surrounding it.

Motility of an organ is detected through a manual listening technique, and correction of abnormal motility is done through an induction technique.

CAUSES OF ORGAN DYSFUNCTION

Visceral Manipulation addresses the organs structurally by considering how they are able to move and function within and in relation to the tissues surrounding them. There are lot of factors that can lead to restrictions of these surrounding tissues, and these restrictions can have significant effect on an organ's ability to move and function. The factor leading to dysfunction does not have to be of recent origin. It is possible that a past event has led to a change in the tissue through either the formation of scar tissue, or by allowing air into a liquid space and thus changing the stickiness of the liquid and the ability of tissues to slide against each other. The most common factors that can affect the organs are:

TRAUMA

Direct trauma on the organ can result from damage to one of the tissues surrounding an organ. It can come from a neighboring organ, the skeletal system, or be transmitted via pressure changes elsewhere in the body. These could be from an accident or blow to the body. Trauma can also be caused by temperature changes like burns or radiation or chemical trauma such as acid burns or poisoning.

SURGERY

Any surgery creates adhesions. Letting air into the tissues where air would not usually be changes the stickiness of the fluids. This causes fascia and other tissues to stick together, creating adhesions.

SCARS

Scars are areas where tissues have healed. As most people's experience, scars never quite return to a perfect condition. Usually, a scar leaves a raised area or mark on the body. In some cases, some of the fine layers in the body may have stuck together. If so, they can prevent the tissues from moving as they should and lead to problems. Such problems can surface years later, as scar tissues change and tighten over time.

INFECTION

When there is an infection, the body attempts to wall it off from the surrounding tissues. The results, once the infection has passed, can be a dry, tethered area. This will pull the surrounding

tissue toward it and create a tension in the body. Overtime, mechanical restrictions can be left behind.

POSTURAL HABITS

If someone has a round-shouldered posture, the organs in the front of the body become a little compressed. As a result, the lungs are not able to expand fully and thereby become compromised.

GRAVITY

Gravity is a continuous force, with all human beings throughout their lives. Gravity means that with changes in posture, the organs may experience pressures that affect them negatively and lead to further compensations in the body.

CHEMICAL

Chemical factors include diet, fluid intake, allergies, drugs, vaccinations, or medications a person uses. These can affect the organs and lead to structural changes and restrictions. For example, having an allergy may lead to tissue inflammation.

INFLAMMATION

Inflammation causes loss of motion of the tissues. Many factors can cause tissue inflammation, including infections, direct trauma, repetitious movement, diet, environmental toxins, poor posture, and emotional stress. Inflammation can lead to stagnation in the lymphatic system (part of the immune system). This in turn can lead to further congestion and restriction in the tissues, both physically and chemically. As tissues heal, an adhesion or scar is formed, which is an area that dries out the fibers of the tissues so they end up arranging themselves in different pattern that they had prior to the incident. In this way, the injury is recorded in the tissues and may continue to affect the body for years to come.

EMOTIONAL STATE

Every high emotional state affects an organ and the tissues surrounding it. When we feel an emotion, our body reacts. A person has only to think of a stressful situation for the jaw to clench, the shoulders to be raised up, and the muscles to tighten. Physical problems cause people pain and worry, or limits their daily activities and enjoyment. Sometimes emotional responses last a few seconds or minutes and are relatively minor. Others are more severe or long lasting. These can really change the body's functioning and create physical problems.

The symptoms of emotional reactions can be almost anything, with the more common ones being digestive spasms, heartburn, vomiting, fainting, ulcers, or more serious disease. Some organs react more quickly, for example, the gallbladder and stomach react to our everyday annoyances while others are slower to react.

All organs are connected to the brain physically and emotionally, but the brain is not able to differentiate between physical and emotional messages. Limbic system is the system in the brain that deals with emotions. Working on these centers and their connections with the affected organ, releasing the emotional component can lead to great physical improvement.

Our emotions affect our individual organs. To state a few, stomach is affected by our social life, duodenum for insecurity, small and large intestines for mood swings, liver for anger and depression, gallbladder for fear of conflict, kidneys for existential fear, bladder for having control, pancreas for grief, and spleen for deep sadness.

CASE HISTORIES

Patient #1:

Patient, 42 years old. She came to me with fibroids that affects her bladder so much. She had a surgery for the removal of fibroids few months before I saw her. The fibroids were not removed by the doctors due to some reason that my patient cannot explain. She came to me with lots of abdominal discomfort as well as bladder incontinence and heaviness. After our first 2 sessions, she noticed that bladder felt lighter. I have been seeing her for 2 years now. She recently had her ultrasound for her organs and gave me the result comparison from what was taken before she came to me. The results showed improvement on overall organs: that her liver size is smaller, gallbladder cyst is smaller, and bladder is normal.

Patient #2:

Patient who is 39 years old came to me because she wanted to get pregnant. She had three miscarriages before coming to me. After doing visceral manipulations for 6 sessions at her uterus, ovaries, and fallopian tubes, and other organs in the viscera, she finally got pregnant within 2 months.

Patient #3:

Patient, 54 years old, came to me for too much bloating. After 2 sessions of visceral manipulation, bloating has not been felt. I am seeing her regularly every month for maintenance.

Patient #4:

Patient, 56 years old, came to me for severe chronic lower back pain. I've been seeing this patient for couple of years for massage at her lower back for the same symptoms. She felt a bit of a relief after every massage appointments, but her lower back severe pain kept coming back. I advised her to come see me for Visceral Osteopathy, to find out if the cause of her lower back pain comes from her viscera. I was correct because when I was doing visceral manipulation on that specific organ, she the pain symptom at her lower back. After releasing the tension for 2 sessions, that severe lower back pain symptom never came back. I am still seeing her for monthly maintenance.

CONCLUSION

Anatomically, all the organs have articulation with each other. Any restrictions caused by inflammation, fibrosis, adhesions, intestinal spasms, etc., will create abnormal tension to the affected organ and thereby causing tension to the other organs.

Visceral manipulation using mobility and motility techniques on a specific organ will not only release tension and improve its performance, but will also affect the mobility and performance of its surrounding organs.

Osteopathic visceral manipulation plays a major role in helping the overall health of a person. It aims to return physiologic motion to the tissues, thereby enhancing normal movement of the body. Visceral manipulation releases tissue restrictions, including adhesions and scars. It increases rate of tissue repair, return normal circulation to the body, restore normal nerve function and stimulate nerve flow in the area being treated.

Manipulations to the viscera reduces inflammation and pain, improve breakdown and removal of waste products, improve the delivery of hormones and chemicals to cells, promotes normal cell-fluid motion and balance.

Everyone needs to have visceral manipulation for better health condition. Visceral manipulation does not treat the symptoms, but the cause.

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