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OSTEOPATHY, GOLF AND UPPER LIMB INJURIES

BY: SHAHLA ESHMAN

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Manual Osteopathic Therapy

Definition:

Osteopathy is a system and philosophy of health care that separated from traditional (allopathic) medical practice about a century ago. It places emphasis on the musculoskeletal system, hence the name—osteo refers to bone and path refers to disease. Osteopaths also believe strongly in the healing power of the body and do their best to facilitate that strength. During this century, the disciplines of osteopathy and allopathic medicine have been converging.

Purpose:

Osteopathy shares many of the same goals as traditional medicine, but places greater emphasis on the relationship between the organs and the musculoskeletal system as well as on treating the whole individual rather than just the disease.

Precautions:

Pain is the chief reason patients seek musculoskeletal treatment. Pain is a symptom, not a disease by itself. Of critical importance is first to determine the cause of the pain. Cancers, brain or spinal cord disease, and many other causes may be lying beneath this symptom. Once it is clear that the pain is originating in the musculoskeletal system, treatment that includes manipulation is appropriate.

History of Osteopathy:

Osteopathy was founded in the 1890s by Dr. Andrew Taylor, who believed that the musculoskeletal system was central to health. The primacy of the musculoskeletal system is also fundamental to chiropractic, a related health discipline. The original theory behind both approaches presumed that energy flowing through the nervous system is influenced by the supporting structure that encase and protect it—the skull and vertebral column. A defect in the musculoskeletal system was believed to alter the flow of this energy and cause disease. Correcting the defect cured the disease. Defects were thought to be misalignments—parts out of place by tiny distances. Treating misalignments became a matter of restoring the parts to their natural arrangement by adjusting them.

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Practice of Osteopathy:

Osteopaths, chiropractors, and physical therapists are the experts in manipulations (adjustments). The place of manipulation in medical care is far from settled, but millions of patients find relief from it. Particularly backs, but also necks, command most of the attention of the musculoskeletal community. This community includes orthopedic surgeons, osteopaths, general and family physicians, orthopedic physicians, chiropractors, physical therapists, massage therapists, specialists in orthotics and prosthetics, and even some dentists and podiatrists. Many types of headaches also originate in the musculoskeletal system. Studies comparing different methods of treating musculoskeletal back, head, and neck pain have not reached a consensus, in spite of the huge numbers of people that suffer from it.

Joint Mobilization:

Joint mobilization is a type of passive movement of a skeletal joint. It is usually aimed at one or more 'target' synovial joints with the aim of achieving a therapeutic effect. These mobilizations have five grades associated with them. Grades one to two are used to help decrease pain within a joint. Grades three to five are used to increase mobility of joint play. Interestingly, a grade five mobilization is really a manipulation. The following are grades for oscillatory mobilizations:

Grade I: Slow oscillations within the first 20-25% of the available joint play range.

Grade II: Slow oscillations within 45-55% of the available joint play range, or from the beginning to the middle of available joint play range.

Grade III: Slow oscillations from the middle of the available joint play range to the end of available joint play range.

Grade IV: Slow oscillations at the end of the available joint play range.

Grade V: Bone is passively moved to the end-range, and a fast thrust is performed. This is manipulation.

The joint mobilization is a passive movement of a joint to restore motion or relieve pain and used to restore joint play that has been lost due to injury or disease. Thus, mobilizations are used when range of motion or mobility is lacking. Small oscillatory motions that do not stretch the capsular or other soft tissue structures are often used for reducing pain, while larger (grade III or IV) oscillatory or sustained motions are used to stretch structures and restore accessory or joint play motions. Movements are slow enough that the patient can voluntarily stop them. The Manual Osteopathy is a passive

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movement of joints over their entire ROM, to expand the ROM and eliminate restrictions.

Osteopathic joint mobilizations are a collection of techniques that aid in the restoration of joint movement and mobility. Joint mobilization helps restore movement to injured joints, reduces stiffness, reduces joint swelling, reduced localized joint adhesions. Joint mobilization can also reduce pressure on ligaments, tendons, nerves, blood vessels and alleviate disc pain.

Then, after treatment, the patient progresses to more aggressive rehabilitation such as therapeutic exercise.

Clinical effects and mechanisms of action:

The clinical effects of joint mobilization have been shown to include:

- Temporary relief of musculoskeletal pain.
- Shortened time to recover from acute back sprains (Rand).
- Temporary increase in passive range of motion (ROM).
- Physiological effects upon the central nervous system.
- No alteration of the position of the sacroiliac joint.

Common side effects of spinal manipulative therapy (SMT) are characterized as mild to moderate and may include: local discomfort, headache, tiredness, or radiating discomfort.

Golf:

Golf is a popular past time that provides exercise with social interaction. However, as with all sports and activities, injury may occur. Many golf-related injuries occur in the upper limb, yet little research on the potential mechanisms of these injuries has been conducted. Golf is a popular recreational activity that can be played by all ages, genders, and skill levels. The golf swing is a dynamic movement with the potential to cause injury to the golfer. Various injuries occur in different sections of the swing and frequently involve soft tissue injuries. An understanding of the mechanics of the golf swing will facilitate appropriate knowledge of the etiology of the injury, thereby improving management. This is particularly true of upper limb golf-related injuries as the arms go through a large range of motion (ROM) during the swing, while providing the

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link between the fast moving club and the power-generating torso. The golf swing is a complex body movement involving a large ROM of the upper limb that acts as a link between the golf club and the body. Injuries to the upper limb account for the majority of golf-related injuries recorded. Many injuries occur as the club impacts the ball and are muscle-related. An understanding of how the body moves and the muscle activity achieved during the golf swing helps the health practitioner to understand why these injuries occur.

Most Common Golf Injuries:

What are the most common injuries suffered by golfers? How do you recognize them, what are the available treatments, and what are some ways you can minimize their impact:

1. Back Pain:

The golf swing (not to mention the hunched-over putting stance many of us get into) puts great stress on the golfer's back, so it's no surprise back pain is the most common problem for golfers. Back pain in golfers might be mechanical or disc-related, arthritis-related, or caused by a stress fracture, among other possible causes.

2. Tennis Elbow / Golfer's Elbow:

Tennis elbow is an inflammation, soreness, or pain on the outside of the upper arm near the elbow. Golfer's elbow is an inflammation, soreness or pain on the inside of the upper arm near the elbow. Tennis elbow is actually more common among golfers than golfer's elbow.

3. Shoulder Pain:

Shoulder pain in a golfer might be caused by any of several different underlying conditions, including: rotator cuff tendinitis, or a tear or impingement in the rotator cuff; A-C joint arthritis; or instability in the joint.

4. Carpal Tunnel Syndrome:

Carpal Tunnel Syndrome is a repetitive stress disorder that occurs in the nerves of the hands. At its worst, carpal tunnel is extremely painful and sometimes incapacitating.

5. DeQuervain's Tendinitis:

DeQuervain's causes pain in the wrist near the base of the thumb, and is caused by an inflammation in the tendons that control the thumb.

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6. Knee Pain:

Knee pain in golfers can be caused by any of numerous underlying issues, among them: a torn meniscus; knee arthritis (osteoarthritis), or kneecap pain (chondromalacia).

7. Trigger Finger:

Trigger finger can cause a finger or fingers to lock up. The condition is caused when the flexor tendon sheath, through which the finger tendons run, is inhibited.

8. Wrist Impaction Syndrome:

Impaction syndromes of the wrist are caused when the bones of the wrist bang into one another due to excess or repetitive movements.

9. ECU Tendon Subluxation:

ECU Tendon Subluxation is caused when the sheath holding the wrist tendon begins sliding in and out of its groove.

10. Fracture of Hamate Bone:

The hamate bone is a small bone on the pinky side of the wrist. The hamate has a small prominence called the hook, which juts into the palm. The way most golfers grip their clubs puts the butt-end of the club right up against the hook of the hamate during the swing.

Case study:

End-Range Mobilization Techniques in Adhesive Capsulitis of the Shoulder Joint: A Multiple-Subject Case Report:

Background and Purpose: The purpose of this case report is to describe the use of end-range mobilization techniques in the management of patients with adhesive capsulitis.

Case Description: Four men and 3 women (mean age=50.2 years, SD=6.0, range=41–65) with adhesive capsulitis of the glenohumeral joint (mean disease duration=8.4 months, SD=3.3, range= 3–12) were treated with end-range mobilization techniques, twice a week for 3 months. Indexes of pain, joint mobility, and function were measured by the same observer before treatment, after 3 months of treatment, and at the time of a 9-month follow-up. In addition, arthrographic assessment of joint capacity (ie, the amount of fluid the joint can contain) and measurement of range of motion of

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glenohumeral abduction on a plain radiograph were conducted initially and after 3 months of treatment.

Outcomes: After 3 months of treatment, there were increases in active range of motion. Mean abduction increased from 91 degrees (SD=16, range=70–120) to 151 degrees (SD=22, range=110–170), mean flexion in the sagittal plane increased from 113 degrees (SD=17, range=90–145) to 147 degrees (SD=18, range=115–175), and mean lateral rotation increased from 13 degrees (SD=13, range=0–40) to 31 degrees (SD=11, range=15–50). There were also increases in passive range of motion: Mean abduction increased from 96 degrees (SD=18, range=70–125) to 159 degrees (SD=24, range=110–180), mean flexion in the sagittal plane increased from 120 degrees (SD=16, range=95–145) to 154 degrees (SD=19, range=120–180), and mean lateral rotation increased from 21 degrees (SD=11, range=10–45) to 41 degrees (SD=8, range=35–55). The mean capacity of the glenohumeral joint capsule (its ability to contain fluid) increased from 10 cc (SD=3, range=6–15) to 15 cc (SD=3, range=10–20). Four patients rated their improvement in shoulder function as excellent, 2 patients rated it as good, and 1 patient rated it as moderate. All patients maintained their gain in joint mobility at the 9-month follow-up.

Discussion: There seems to be a role for intensive mobilization techniques in the treatment of adhesive capsulitis. Controlled studies regarding the effectiveness of end-range mobilization techniques in the treatment of adhesive capsulitis are warranted.

Osteopathy & Sports Injuries:

Injury is an almost inevitable part of a sports person's life. It may take the form of an acute ligament tear or be as mild as post-exercise muscle soreness. Either way, the majority of sports related injuries can be prevented or alleviated by appropriate conditioning under the supervision of a qualified professional.

When a sportsperson consults an osteopath, he/she examines the posture and condition of those parts which make the human body a dynamic machine - these include the muscles, ligaments and tendons of all joints from head to toe.

The osteopath examines the strength and flexibility of these tissues and considers how well adapted they are to the individual sportsperson and the chosen sport.

Mobility of the body is of the utmost importance to an athlete. Poor flexibility in the joints will prevent the body performing at its best and is often an important contributory element to injury.

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Specific treatment may involve stretching of the muscles, joints, tendons and ligaments. Mobilization of the joint or spine may also be undertaken to increase the flexibility of the joints that are causing the discomfort.

Osteopathy and Golf Injuries (Treatment):

Osteopathy can help to resolve patients' pain and improve their swing:

- **Back Pain:**

The flexed (forward) position combined with strong rotational forces that occur during the golf swing can be a bad combination for the lower back. If there is any underlying tightness it not only limits the movement available, but leaves patient more susceptible to damage, such as joint sprain or disc injuries. Osteopathic treatment can help to ensure the pelvis, hips and spine are free, mobile and working together to provide an easy, painless movement.

- **Knee or Hip Pain:**

If, during the swing, patient's weight is positioned slightly incorrectly this can transfer into the limb she/he is weight bearing on. This can lead to a strain in the hip capsule or the gluteal (buttock) muscles. If the rotation makes it all the way to the knee she/he is at risk of damaging the meniscus, ligaments or cartilage. Osteopaths are qualified to perform orthopaedic testing to determine which structures may be involved. After a full examination is carried out it can then be decided whether treatment is appropriate or whether patient need to be referred for further assessment.

- **Golfer's Elbow:**

A painful condition, where the muscles of the forearm pull at their attachment on the inside of the elbow, creating inflammation. Funnily it is also quite common for golfers to experience Tennis Elbow, where the pain is on the outside of the elbow. Any restriction in the movement of the joints of the wrist, elbow, shoulder or spine, will alter the effectiveness of the forearm muscles and can leave patient predisposed to developing this condition. Treatment would involve addressing all of these areas, to aid repair and prevent recurrence.

- **Shoulder Pain:**

The shoulder is an extremely complex joint, and either shoulder can be affected in swinging the club, leading to tendonitis, tears, and joint inflammation or instability. As in elbow injuries described above, if adjacent areas are not functioning as they should, ie stiffness in the spine, neck or elbow, a higher demand will be placed on the shoulder, leaving it prone to injury. Any treatment should look at all of these areas, not only where patient's pain is.

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- **Hand or Wrist Injuries:**

Some golfers may experience such as Carpal Tunnel Syndrome, tendonitis or fracture of a carpal bone in the hand. Osteopathy works to release tension in the muscles, ligaments and joints around the affected areas and further up the limb to aid blood flow, drainage and freedom of movement, taking the stress off the affected area.

Conclusion:

The osteopath will spend time taking a detailed medical history including important information about patient's lifestyle and diet. The osteopath will want to know about when the symptoms began and about any factors that affect them.

Osteopaths treat with their hands using a wide variety of treatment techniques aimed at improving joint mobility, reducing muscle spasm and decreasing inflammation. This improves function, promotes fast and effective healing and reduces pain.

Osteopathic treatment always takes into account the body as a whole, whether it is working together smoothly or if some cogs are churning too hard for others that aren't churning at all. Treatment includes a variety of stretching, mobilising and manipulative techniques such as articulation, joint mobilisation and gentle joint manipulation, muscle energy techniques, soft tissue massage, traction as well as the use of ultrasound where appropriate. Treatment always aims at getting to the cause of patients' problem, so they can get back out on that golf course and play their best!

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