

China Goes Global: Sports Medicine & Sports Management in China

Dr. M. Noman Ahmed Qureshi

(M.B.B.S) Bachelor of Medicine, Bachelor of Surgery (MS) Master of Surgery

Abstract- This study highlights introduction of domestic and international public offering of sports medicine national medical organizations in China. The articles which implement the Party and the state of health, sports, science and technology policy of principles and policies and double standard, and implementing the theory and practice, universal principle of combining with the increase, reflecting China's sports medicine research and clinical work of the important progress, and promote domestic and international sports medicine academic exchanges, to enhance China's national constitution and the level of technology to improve services to sport. There are a number of traditional sports medicines in China which are sometimes even much better than the modern day medicines. For example, Penetrans Plus which is an MSM-based ointment that provides the body with an important ingredient used in the building of cell walls (MSM), and which carries its pain-relief ingredients deep into the muscle. Tiger Balm wonderfully soothing ointment that heats up the muscle nicely. Sports crème odorless pain killing ointment but it helped make sleep possible. This study reveals that the Chinese traditional medicines in use for centuries are more effective in the local climate than the modern medicines.

Index Terms- Sports medicine, Theory and practice, Research and clinical work, Traditional sports medicine, Penetrans plus, MSM bases, Tiger balm, Ointment, Healing, odorless

I. INTRODUCTION

Sports medicine is a medical specialty involving care for adult and pediatric patients with acute illnesses or injuries that require immediate medical attention. While not usually providing long-term or continuing care, Sports Medicine Physicians (DOs/MDs) diagnose a variety of illnesses and undertake acute interventions to resuscitate and stabilize patients. Sports Medicine Physicians practice in hospital sports departments, pre-hospital settings via sports medical services, other locations where initial medical treatment of illness takes place, and recently the intensive-care unit. Just as clinicians operate by immediacy rules under large sports organizations, sports practitioners aim to diagnose emergent conditions and stabilize the patient for definitive care

Physicians specializing in Sports Medicine in the US and Canada can enter fellowships to receive credentials in subspecialties. These are palliative medicine, critical-care medicine, medical toxicology, wilderness medicine, pediatric Sports Medicine, sports medicine, disaster medicine, ultrasound, sports medical services, and undersea and hyperbaric medicine.

Sports Medicine has evolved to treat conditions that pose a threat to life, limb, or have a significant risk of morbidity. In the words of the International Federation for Sports Medicine.

Sports Medicine is a medical specialty—a field of practice based on the knowledge and skills required for the prevention, diagnosis and management of acute and urgent aspects of illness and injury affecting patients of all age groups with a full spectrum of undifferentiated physical and behavioral disorders. It further encompasses an understanding of the development of pre-hospital and in-hospital sports medical systems and the skills necessary for these developments.

Sports Medicine encompasses a large amount of general medicine and surgery including the surgical sub-specialties. Sports Physicians are tasked with seeing a large number of patients, treating their illnesses and arranging for disposition—either admitting them to the hospital or releasing them after treatment as necessary. The Sports Physician requires a broad field of knowledge and advanced procedural skills often including surgical procedures, trauma resuscitation, advanced cardiac life support life support and advanced airway management. Sports Physicians must have the skills of many specialists—the ability to resuscitate a patient (critical care medicine), manage a difficult airway (anesthesia), suture a complex laceration (plastic surgery), reduce (set) a fractured bone or dislocated joint (orthopedic surgery), treat a heart attack (cardiology), stop a bad nosebleed (ENT), place a chest tube (cardiothoracic surgery), and to conduct and interpret x-rays and ultrasounds (radiology).

II. HISTORY

During the French Revolution, after seeing the speed with which the carriages of the French flying artillery plodded across the battlefields, French military surgeon Dominique Jean Larrey applied the idea of ambulances, or "flying carriages", for rapid transport of wounded soldiers to a central place where medical care was more accessible and effective. Larrey manned ambulances with trained crews of drivers, corpsmen and litter-bearers and had them bring the wounded to centralized field hospitals, effectively creating a forerunner of the modern MASH units. Dominique Jean Larrey is sometimes called the father of Sports Medicine for his strategies during the French wars.

Sports Medicine as a medical specialty is relatively young. Prior to the 1960s and 1970s, in general hospital sports departments were staffed by physicians on staff at the hospital on a rotating basis, among them general surgeons, internists, psychiatrists, and dermatologists. Physicians in training (interns and residents), foreign medical graduates and sometimes nurses

also staffed the Sports Department. Sports Medicine was born as a specialty in order to fill the time commitment required by physicians on staff to work in the increasingly chaotic sports departments of the time. During this period, groups of physicians began to emerge who had left their respective practices in order to devote their work completely to the Sports Medicine. The first of such groups was headed by Dr. James DeWitt Mills who, along with four associate physicians; Dr. Chalmers A. Loughridge, Dr. William Weaver, Dr. John McDade, and Dr. Steven Bednar at Alexandria Hospital, Virginia, established 24/7 year-round sports care, which became known as the "Alexandria Plan". It was not until the establishment of American College of Sports Physicians (ACEP), the recognition of Sports Medicine training programs by the AMA and the AOA, and in 1979 a historical vote by the American Board of Medical Specialties that Sports Medicine became a recognized medical specialty. The first Sports Medicine residency program in the world was begun in 1970 at the University of Cincinnati and the first Department of Sports Medicine at a U.S. medical school was founded in 1971 at the University of Southern California.

There are only two academic societies in Sports Medicine in China, Chinese Association of Sports Medicine and Chinese College of Sports Physicians, Chinese Association of Sports Medicine was established in 1986, under the management of the China Medical Society (CMS). However, China, Chinese Association of Sports Medicine was organized by the Ministry of Public Health in 2009. Their primary missions and tasks are not yet clearly defined. As a matter of fact, there are some overlaps in terms of organization administrators and academic activities.

The current post-graduate Sports Medicine training process is highly complex in China. The first Sports Medicine post-graduate training took place in 1984 at the Peking Union Medical College Hospital. Because specialty certification in Sports Medicine has not been established, formal training is not required to practice Sports Medicine in China. For those physicians that do choose to obtain training in Sports Medicine, several options are available. Graduates from medical school can apply directly to hospitals for staff physician-in-training positions, which eventually lead to a staff position at that same hospital. In addition, physicians from smaller hospitals can go to those larger academic centers for a 6 to 12-month post-graduate re-education. While these physicians may undergo the same training as the staff physicians, they will return to their own hospital once their training is completed. Finally, physicians having completed previous post-graduate training may choose to apply for fellowship positions for further training in Sports Medicine.

About one decade ago, Sports Medicine residency training was centralized at the municipal levels, following the guidelines issued by The Ministry of Public Health. Residency programs in all hospitals are called residency training bases, which have to be approved by local health governments. These bases are hospital-based, but the residents are selected and managed by the municipal associations of medical education. These associations are also the authoritative body of setting up their residents' training curriculum. All medical school graduates wanting to practice medicine have to go through 5 years of residency training at designated training bases, first 3 years of general rotation followed by 2 more years of specialty-centered training.

"Chinese Sports Medicine" is more commonly known as Traditional Chinese Medicine, a very effective healing modality that works without drugs (so, naturally, health insurance covers hardly any of it). But I very much like the term "sports medicine", because it's indicative of one kind of problem that it handles exceptionally well. (It also handles headaches, back pain, and many other problems. But categorizing it as "sports medicine" contrasts it nicely with "internal medicine", favor a nutritional approach.

For centuries, Chinese sufferers have sought relief from such injuries by consulting practitioners of Chinese medicine, who specialize in a sub-branch of sports or accident injuries. One of the best clinics, located in Oakland's Chinatown, draws Chinese restaurant workers, high school-soccer players, and the occasional in-the-know Westerner, perhaps fresh from a biking bang-up. Run by a father-son team from Hong Kong, the tiny clinic is essentially a one-room fix-it shop, where the patient sits on a stool and is tended to while other patients waiting their turn look on interestedly. After a careful examination of the injured site, Simon Tang, who speaks English, or his Chinese-speaking father, will give a vigorous but careful massage, slapping, pummeling, pressing, jabbing, and rubbing the area of injury. Then an aromatic dark paste of Chinese herbs will be laid across the injury and wrapped with a flexible gauze bandage. The opposite of Western medical practices, which advocate immobilization and painkillers, this Chinese treatment is based on increasing blood flow to the injury to speed healing. Expect to return multiple times, depending on the severity of the injury. The real bottom line? It works.

Here's what those techniques are doing:

III. ACUPUNCTURE

Acupuncture was used for allergies, and got nowhere (an example of using an external technique for an internal problem that was better treated nutritionally, as described in *Conquering Allergies*. But for sports injuries, it does appear to have its uses. In his treatments, electrodes are attached to the needles, and a runs a small, battery-powered current through them. Then it is ramped up the current until the patient feels a twitching sensation. (It feels odd, at first, until one gets used to it.)

The purpose of the current is that negative leads can decrease vasodilation (dilation of the blood vessels) hence reduction of edema/swelling of injured tissues. Positive leads can increase vasodilation, which results in pain relief.

It seems that, in China, doctors come by every few minutes and jiggle the needles. That creates a pretty intense sensation that people in China are accustomed to. Since it's new to Westerners, it feels painful at first--mostly because its a strange sensation. The technique is to rise it up until one tells that it feels painful, then this is backed it off and leaves it there, just below the pain threshold. Eventually, though, one gets to a position from where one doesn't mind the twitching sensation, and the physician can use a stronger current.

So with the muscles mildly twitching--which is significant for two very important reasons. First, it activates the lymph system, which drains away cellular wastes and pathogens killed by the immune system. The lymph system only works in

response to muscle contraction, as the contractions squeeze the lymph through tiny, one-way valves.

Second, the muscles squeeze the capillaries, which helps to move blood to the tissues and away from it. (That action is most significant when there is capillary damage. It's like a puddle of old rain water that has collected on the ground--the contracting muscles help to pump it away, so it can be replaced with "fresh water" or, in this case, fresh blood.)

Heat Lamp

The infrared heat lamp penetrates deep into the muscles, warming them, relaxing them, and increasing blood flow. The blood carries oxygen and nutrients, supplying both the energy and the building blocks needed for cellular repair and growth.

Massage

Deep tissue massage breaks up adhesions (scar tissue), and further improves blood flow to promote healing. The muscle warming and relaxing that precedes it allows the practitioner to go much deeper before you feel any real pain.

Heating Cups

Imagine the biggest hickey you've ever had in your life. That's what the heated cups do. But rather than putting them on the injury, you place them next to it, to draw away blood that's clogging up the works.

Heat for Healing

Imagine you've gone to a disaster site where both the water mains and the sewage lines are broken. Water is flooding the place, because it has nowhere to drain. That's basically what you see with your basic injury. The repair crew (nutrients in the blood) can't get to the houses they need to fix (cells), because there's water everywhere. So the first step is to minimize the damage.

In the West, we use the RICE formula (rest, ice, compression, elevation), for the first 24 hours. After that, you're supposed to use RH (rest and heat). The ice and elevation turns off the water, in effect, so water stops flooding the place. After that, heat is used to improve blood flow, so that nutrients (the repair crew) can do their work.

In the East, the approach is to get new blood to the cells as quickly as possible, so the repair crews can go to work immediately. But what to do about the flooding? The approach is to put in water pumps to take it away and put it somewhere else.

Those water pumps come in two forms:

1. **The heated cups** – Cups will be placed to either side of the injured area, so blood is drawn away from the injury site. The swelling and inflammation of the injured area is immediately reduced, allowing fresh, oxygenated blood to get to the injury, along with the nutrients it carries.

2. **Acupuncture** – Depending on the current direction and placement of the needles, the resulting vasodilation, vasoconstriction, and general muscle twitching does some combination of stimulating drainage, stimulating blood flow, or restricting blood flow, as appropriate.

Multi-Target Healing

It's even possible to work on multiple areas at once. For example, you have scar tissue from old injuries in my right knee and ankle, and you are carrying some excess belly fat that has stubbornly resisted reduction despite two years of fairly intensive effort.

So, in a recent session we had acupuncture pins and heat lamps on the ankle, knee, upper arm, and belly. In effect, we did whole-spectrum healing, all in the same hour.

Stages of Recovery

As with all such recovery, the healing occurs in three distinct stages:

1. Recover passive range of motion, without pain.

In this case, use the good arm to lift the injured arm, or brace it against a wall and move my body, working to get the arm stretched out as far as it can go. Doing so helps to break up scar tissue (it hurts, but you don't want to do too much at any one time), and brings more blood to the area for healing. (Scar tissue doesn't stretch. It tears. So this part of the process ensures that things are healing with useful muscle tissue.)

2. Recover active range of motion, without pain.

In this case, it means moving the arm under its own power, through its full range of motion. When that can be done without pain, it means that the muscle tissue has fully healed.

3. Rehabilitation work.

Training the muscle using various forms of resistance to make it stronger. At this stage, you recover full use of the injured limb. You also strengthen the muscles all around the injured area (the supporting muscles), which stabilize the limb in use and help prevent future injury.

Additional Ointments

These aren't recommended by Chinese medicine in particular, but in the spirit of full disclosure,

Penetrans + Plus

An MSM-based ointment that provides the body with an important ingredient used in the building of cell walls (MSM), and which carries its pain-relief ingredients deep into the muscle. (MSM is kind of like a trucking firm. It transports whatever you want.

Tiger Balm

Wonderfully soothing ointment that heats up the muscle nicely. (I tried Icy Hot, but the ointment didn't work that well for me. The patches were pretty good, though.)

Sportscreme

Odorless pain killing ointment. May not promote healing, but it helped make sleep possible, the first few days, until I found the other salves..

IV. PHYSICAL FITNESS OF CHINESE PEOPLE

The "Physical Health Law of the People's Republic of China" was adopted in 1995. In the same year, the State Council promulgated the "Outline of Nationwide Physical Fitness Program", followed by a series of rules and regulations. A survey released by the State Physical Culture Administration indicates that at present 33.9% of the population between 7 and 70 exercise regularly and 60.7 percent of the urban population go to sports clubs to engage in fitness activities. It is expected that by the end of 2005, 37 percent of China's total population will participate in regular physical exercises, and that over 95 percent of students will meet the National Physical Exercise Standard. Aiming to improve the health and the overall physical condition of the general population, the Nationwide Physical Fitness Program, with an emphasis on young people and children, encourages everyone to engage in at least one sporting activity every day, learn at least two ways of keeping fit and have a health examination every year.

In this 15 year long program, the government aims to build a sport and health-building service system for the general public. There are about 620,000 gymnasiums and stadiums across China, most of them open to and widely used by the general public. Outdoor fitness centers have been installed in urban communities in public parks, squares, schoolyards, and other convenient locations. All communities and neighborhoods in Beijing are equipped with fitness facilities that meet the national standard. Building on what it already had, Tianjin has instituted large-scale expansion of its outdoor and indoor fitness facilities and stadiums. 2004 saw the completion of China's first large fitness arena with a floor area in excess of 10,000 sq m, etc.

Starting in 2001, the State Physical Culture Administration has set aside the proceeds of the sports lottery as pilot funds, in order to build "China Sports Lottery Nationwide Physical Fitness Centers" as pilot projects in 31 large and medium-sized cities throughout the country, including Dalian, Beijing and Changchun. Some of these centers have already been built. Meanwhile, some 196 million yuan of sports lottery proceeds were used to construct public sporting facilities in China's less-developed western areas and in the Three Gorges region of the Yangtze River, supporting 101 counties and towns.

The role of the sports managers has become very significant in the wake of the excellent performance of Chinese sportsmen in individual and team sports has become very significant. As he has to look after the health of the players and to get the injuries received during the run of the play healed in a professional way. So the Chinese sports organizers have stressed on this factor to keep their players in trim.

V. CHINA'S RISE IN SPORTS

Ping pong is the official name for the sport of table tennis in China. Apart from the national representative team, the table tennis community in China continues to produce many world-class players, and this depth of skill allows the country to continue dominating recent world titles after a short break during the 1990s. The overwhelming dominance of China in the sport has triggered a series of rules changes in the International Table Tennis Federation and as part of the Olympics. Ma Long is currently one of the highest-ranked Chinese table tennis players, and the highest-ranked player in the world. Deng Yaping is

regarded by many as one of the greatest table tennis players of all time. Table tennis is the biggest amateur recreational sport in China today, with an estimated 300 million players.

China led the gold medal count (51) at the 2008 Summer Olympics, which were held in Beijing from 8 August to 24 August 2008 which number 8 is the lucky number which is associated with prosperity and confidence in Chinese culture. China will also host the 2014 Youth Olympic Badminton, football, basketball and table tennis are the main sports in China. Prior to the 1990s, sport in China, as in some other countries, was completely government-funded. Some top athletes had quit at the height of their careers because they were uncertain about life post retirement. The situation began to change in 1994 when Chinese football became the first sport to take the professionalization road and in its wake similar reforms were carried out in basketball, volleyball, ping pong and weiqi. The process brought with it commercialization; sport associations became profit-making entities and a club system came into being; professional leagues formed, improving China's sports environment; and commercial management systems took shape. The professionalization of sports has encouraged the emergence of a sports management market and business-structured systems. Sports club operations now cover ticket sales, advertising, club transfers, commercial matches, television broadcasting and other commercial activities. Another aspect of the reform is that some Chinese athletes have joined foreign professional leagues. For instance, basketball star Yao Ming entered the NBA in the 2002 draft.

Games from 16 to 28 August 2014 and will continue the fever for bidding for 2030 or 2038 Winter Olympics and will choose a Chinese city which will host.

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AUTHORS

First Author – Dr. M. Noman Ahmed Qureshi, (M.B.B.S)
Bachelor of Medicine, Bachelor of Surgery (MS) Master in surgery, Email: nomandr@yahoo.co.uk