

The Pain Jungle - Assessment and Treatment with Gunn Intramuscular Stimulation (IMS)

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Which Animal Are We Chasing?

Would you like to learn about an effective drug and surgery free treatment for pain relief? If the answer is a sceptical yes then please read on.

This article will hopefully wet your appetite and get you to embark on a journey of discovery into the jungle of human pain. In this jungle, metaphorically speaking, there are many different animals. Pain can disguise itself in many forms. The secret of killing pain is in knowing which animal you are dealing with before choosing your weapon.

My background is in human and animal physiology, physiotherapy and musculoskeletal acupuncture. I have collected rows of certificates in my search, and until I studied Intramuscular Stimulation (IMS), none of them allowed me to catch this elusive animal that I now come to realize is 'neuropathic pain'.

There are broadly speaking three types of animals in the jungle, but we are concerned here with only one. The animals we are not concerned with are:

1. Those described as pain due to acute injury or inflammation.
2. Those related to psychogenic disorders, including severe depression.

We are going to take a closer look at the more puzzling third group, exhibited by conditions such as tennis elbow, back pain, repetitive strain, frozen shoulder, whiplash and fibromyalgia. These are all the result of the same type of pathology called neuropathy. You cannot kill this pain by cutting it out with surgery and it cannot be hidden by drugs. The only way to deal with this animal is by desensitizing it by relieving the irritation at its source. Invariably this is at the nerve root.

Significantly, every one of us will see this animal at some time in our lives. But the camouflage is so effective it takes a special kind of hunter to find its cause. Professor Gunn, a world guru and Clinical Professor in pain relief, spent years mapping out muscle activity using EMG (Electromyography). He related this to physical signs, muscle shortening being the most important to the understanding of this third type of painful condition.

In 1996, Prof Gunn founded iSTOP (Institute for The Study and Treatment of Pain) in Vancouver, Canada, to promote IMS across the world and ensure its development. After many exciting trips to this clinic, and then to the rapidly evolving centre of excellence in Seoul, South Korea, my ability to hunt and kill this elusive animal improved immeasurably.



Prof Gunn

Neuropathic Pain

The treatment of chronic pain has always been a bone of contention. I do not wish to debate as to which aspect is truly a new invention and which aspect is thousands of years old. My concern is to convey the truly amazing results that I have both witnessed and achieved through IMS, the latter being a fusion of oriental acupuncture with western concepts of neurophysiology.

Prof Gunn theorizes that many patients with chronic pain have tender shortened muscles, because of neuropathy of the segmental nerves that supply them.^{1,2} His theory embraces the sound physiological principles of supersensitivity by Cannon and Rosenblueth.³ Their research explained the problems of supersensitivity when nerves themselves were sick. This can be likened to a house alarm whose sensing system is too sensitive and hence normally innocent activities cause the alarm to go off. In the same way a supersensitive nerve reacts abnormally to innocuous signals.

Ageing, accidents and poor posture all injure the nerves. Normal electrical signals are interrupted and the muscles become over-reactive to very small traces of a chemical called acetylcholine. Prof Gunn states "It's like driving a car with the brakes on." Tight muscles lead to neuropathy in which poor blood circulation will make the area feel cold. This neuropathy also changes the skin surface, appearing pitted with reduced hair growth in the affected dermatome. Joint range is often restricted.

The disaster continues. Shortened muscles pull on tendons, creating conditions like Achilles tendonitis or Golfers elbow. They compress spinal discs and hence the nerves, leading to sciatica and facet joint osteoarthritis. It accelerates the osteoarthritic changes in major joints. Lengthy problems can lead to permanent scarring and this is why it is imperative that both GPs and Physiotherapists recognize this type of animal and intervene early.

IMS Treatment

The programme of treatment can include gentle acupuncture, laser and stretching prior to IMS. IMS is a dry needling technique using needles varying between 0.25 and 0.35mm gauge. The technique is most effective when the needle is placed within a plunger, a device which both enables extremely accurate control of the needle and significantly increases the amount of needling attainable within any amount of time. Ultimately the plunger, a device developed by Prof Gunn, allows the needle to be used as a micro surgical tool, preventing the need for surgery. Having equipped yourself with this formidable weapon you can hunt down this neuropathic problem and kill the pain.

The insertion of the needle into the shortened muscle causes an instantaneous shock to that muscle, measurable with EMG, facilitating release. Locally it causes bleeding, attracting blood clotting platelets and growth factors to promote healing.

The implication of the muscle release is that it restores transmission along dormant nerve pathways ultimately curing the condition. This can be seen objectively with changes to neuropathic signs and subjectively with absence of pain.

Assessment of Neuropathic Signs

Evidence needs to be found not only with questioning but most importantly by carrying out many physical tests to hunt out which animal we are dealing with and where is it hiding. Include questions relating to internal organs as well as musculoskeletal. The presence of neuropathic pain has to be confirmed before moving on to IMS treatment. Visible signs of a dysfunctional nerve and its corresponding spinal levels can be pieced together

like a jigsaw picture. The visible neuropathic signs can be grouped into sensory, motor, autonomic and trophic.

Sensory changes:

- Muscle tenderness
- Exaggerated sensitivity
- Numbness

Motor changes:

- Shortened muscles and restricted joints
- Thickened palpable muscle bands

Autonomic features:

- Coldness
- Excessive perspiration
- Goosebumps
- Excessive fluid in the subcutaneous tissue called trophoedema. (Skin rolling and matchstick tests.)

Trophic Changes:

- Localized hair loss
- Brittle nails
- Abnormal skin, i.e. psoriasis

Some of these signs might at first appear insignificant, but I cannot emphasize enough the benefits of learning to understand easily recognizable signs which clearly indicate a problem and its location. To help illustrate, here are two case studies.

Case Study 1 – Drugs Elimination

This patient worked in a physically demanding job when his 'back went'. He staggered into the clinic like a drunk, as a result of being prescribed a huge cocktail of pain killers from his GP, who could offer no help other than drugs and wait for the pain to go away. His speech was incoherent and the pain was so severe that assessment had to rely on neuropathic signs.

On flexing the patient forward and palpating the spinous processes, the tip of L4 (Lumbar 4) was thickened and prominent, indicating a problem in the disc below. This assessment was further supported by a damp strip at L4 and orange peel effect, indicating trophoedema. Sliding my hand down the legs, the L4 dermatome was cold on both legs and there was visible hair loss.

I found thickened superficial shortened muscles between L4 and L5. On deep needling with the plunger, both multifidus and rotators were gripping the left L4/5 disc and left sciatic nerve with a vengeance. He returned three days later and declared he was 50% better and had already cut back on the drugs to the extent he was coherent. Following the second session he said he felt 100% better and had stopped taking all the drugs. On the third visit he was doing well although some calf pain had reappeared. The needle still grabbed at L4/5 indicating that the problem had not been fully resolved. One week later he still had an ache in his calf, although not bad enough to need even mild pain killers. Another week on and he was pain free with no needle grab. He was discharged after five treatments.

Case Study 2 – Surgery Avoidance

This lady was referred to the clinic by an insurance company who indicated that she needed immediate help prior to a knee operation. She had severe pain in the knee and was unable to walk.

All the tests for the knee ligaments and menisci were negative. The knee appeared normal but the erector spinae muscles in her back were in spasm. On palpation there was a thickened nodule on the right of L3, which related to the pain in the knee area. My hand skidded on damp skin at L3, which also exhibited orange peel effect. The dermatome L3 over the lower aspect of her thigh had hair loss and was cold.

I commenced treatment by desensitizing the area with laser and acupuncture, covering the area between L2

and L5. Two days later the patient still struggled to walk. I laid her on her side, used laser as preparation and then needled once, with the help of the plunger, at L4 level, releasing tight muscle fibres. She yelled and said that's my knee pain. Four days later the pain had centralized to her buttock, which was an excellent improvement, and with further IMS I released the remaining tight multifidus fibres. A review eight days later showed full pain-free movement and she was discharged with no further problems and no need for a knee operation.

Frequently Asked Questions

What conditions respond well to IMS?

Sciatica responds brilliantly. In days we have got people back to work and sports. With the pressure taken off sensitive structures within the spine, such as nerve roots, prolapsed discs and facet joints, they all have the best possible chance to heal without surgical involvement. It is then important to restore the stability with exercise.

In the cervical area, carpal tunnel nerve entrapment can be relieved by this method if treated early enough. RSI (Repetitive Strain Injury) can be helped greatly with IMS and changes to the workstation.

For the sports-oriented, chronic muscle shortening in the forearm causes conditions such as tennis and Golfer's elbow. These can be cured by needling the lower cervical and specific arm muscles.

Frozen shoulder for those of us in our 40s can be extremely debilitating. Current treatment options are long term physical therapy and corticosteroid injections, usually not resolved for up to 18 months. IMS can resolve this in many cases in days or weeks by needling cervical and rotator cuff muscles.

Hamstring injuries are a major problem within football. IMS has demonstrably resolved these problems with lumbar needling. IMS is now being used within the premier league.

Achilles tendonitis can cause major lay offs for runners. With IMS treatment, gentle training can continue and the problem can be resolved within days.

The knee is always vulnerable to overexertion and twisting. Sports injuries to the knee can respond quickly and chronic anterior knee pain can be a thing of the past. Numerous Olympic athletes are now being treated with IMS.

Is IMS the same as Acupuncture?

Acupuncture is an amazing ancient philosophy, its diagnosis and practice is based on oriental medicine originating many thousands of years ago.

IMS is based on western medical knowledge and is aimed at treating neuropathic pain. IMS can only be administered by chartered physiotherapists or MDs who have a background in acupuncture and who have been trained by an authorized IMS instructor.

I hate needles. Will it hurt?

When the muscle is normal, you should not feel anything at all, other than possibly a mild prick as the needle enters the skin. The needle is much thinner than the hollow needles used for injections or taking blood. However, if the muscle is supersensitive and in spasm, there is a very short but unpleasant cramping pain. This is due to the needle being grabbed by the muscle.

Why don't I feel the same unpleasant sensations with Acupuncture?

Acupuncture does not seek out the centre of muscles in spasm which elicits the grab at the heart of the supersensitivity. Acupuncture is based on inserting needles according to meridian points that form a map based on Traditional Chinese Medicine. This can often help a lot, especially if the problem is not severe. With mild

cases up to 70% of the problem can be treated with acupuncture and laser alone. If the problem is neuropathic, traditional acupuncture will not cure it.

What is the Plunger?

The Plunger developed by Prof Gunn turns dry needling into microsurgery. It transforms the use of the needle into a precision instrument, enabling many tiny incisions, literally cutting away the problem with a 0.25mm cutting edge.

Why does IMS feel more comfortable after using a Laser?

The benefit of the laser is that it has an analgesic effect on the area and starts the healing process before the needle is inserted.

I am pain free, do I need to keep coming?

Once treated there is no need for top-ups.

I have severe Osteoarthritis with bone erosion. Can IMS help?

IMS cannot change structural defects.

Could early IMS treatment have helped to arrest Osteoarthritis development?

Yes. Unwell nerves equals shortened muscles equals tight tendons equals accelerated bone erosion.

How many treatments do I need and how often?

The number of treatments depends on many factors: age, stress, nutrition, general health, the severity and duration of the condition and the degree of fibrosis. Furthermore, any previous surgery complicates the picture.

Typically my clinic aims to see an improvement within two treatments or would question why. Normally five to six treatments will resolve it, complex cases require more.

Frequency of treatment depends on the individual's ability to heal. Treatments can be as often as weekly or as infrequent as monthly. IMS cures cumulatively rather than offers temporary help. Therefore, leaving longer gaps between treatments is not an issue.

Can IMS cure me?

IMS is unequalled in the treatment of pain of a neuropathic origin. However, it is just one tool in the box to be used in combination with the many other tools available to fight pain.

How do I find IMS practitioners who are correctly trained?

The best source is the iSTOP website, www.istop.org. It lists all approved IMS practitioners and their level. At the moment IMS is still in the pioneering phase and there are not many practitioners available.

It is best to ask questions as to the amount of training any practitioner has had and if they have passed the exams. They should have also attended several days of internships with a recognized IMS instructor, which is imperative to assess practical skills in the use of a plunger.

Summary

I have been fortunate to be taught how to identify the signs associated with neuropathy. The results that I have achieved by correct diagnosis and the use of IMS have been amazing. Surgery and drugs are not the answer with neuropathic pain.

Read the signs, identify the animal and use the Gunn.

References

1. Gunn CC. *The Gunn Approach to the Treatment of Chronic Pain*. Churchill Livingstone. ISBN 0-443-05422-3.
2. Gunn CC. *Pain, Acupuncture and IMS*. iSTOP. January 2004.
3. Cannon WB and Rosenblueth A. *The Supersensitivity of Denervated Structures*. Macmillan. 1949.

Acknowledgments

Photographs kindly supplied by ISTOP, Vancouver, Canada.

Further Information

The iSTOP website is the official website for IMS in the world. Nicky Snazell runs training courses in the UK and offers internships at her clinic in Staffordshire.