CASE-BASED DISCUSSION – 11th MARCH 2020

Case 1 - Restless Leg Syndrome (RLS)

Patient:

- 45 year old male
- Built like a heavyweight boxer - very muscular, powerful chap. Not overweight.
- Attends gym 3x / week; weight training and CV exercises
- First attended clinic 12 months ago presenting with:

  – pronated left foot (ongoing for some 20 years); with frequent metatarsalgia
  – arthritic changes to 1st, 2nd and 3rd metatarsophalangeal (m/p) joints
  – RLS mainly involving calf muscles, worse on right side
  – Weak right gluteus med / min with intermittent pain in right buttock and down right thigh

Medication – Pramipexole (dopamine agonist)prescribed by GP to dampen RLS.

Has been provided with orthotic by podiatrist to support left foot

Examination:

- Standing – superior right ileum, convex scoliosis in lumbar spine to left, positive Trendelenberg
- Supine – short right leg (not anatomical), superior right ASIS, chronic H/T of right TFL / ITB and vastus lateralis
- Prone – superior right PSIS confirming superior shift in right ileum, sacrum side bent left, chronic H/T of right gluteus med / min, QL and LES; palpation and tests indicated significant tension in right SIJ.

After four initial treatments over 7 weeks the patient was standing straighter, Trendelenberg negative, no thigh pain, no change to foot pain, no change in RLS. Patient decided not to proceed with any further treatment at that stage.

Patient attended again recently (circa 1 year since previous visits) reporting return of right buttock and thigh pain. Will be having a bursectomy to the left 1st m/p joint. RLS is ongoing and is concerned that the medication is not really helping, has some side effects. Looking for alternative solution.

Discussion:

Restless leg syndrome:

Not pain. It's fairly constant, sort of a kind of ramps up until you've just got to move your legs. And it's continuous, particularly overnight. Symptoms are worse when still, so when you sit down in the evening and then quite bad at night.

Pt seen yesterday – he's started working on the calf muscles, gastrocs particularly and soleus, which, which are chronically shortened and painful.

The orthotic: he's been given one orthotic rather than a pair? Is it a decent one or NHS monstrosity?

Looks like it's a reasonably made orthotic by a podiatrist, just the one in the left foot.

Purpose of that orthotic?

Just to give support to pronated foot

Orthotic may have absolutely nothing to do with restless legs. Normally prescribe orthotics to address, not the cosmetic effect (pronated foot) but some sorts of symptom which it's provoked. It hasn't had an effect on metatarsalgia. Wondered whether it's worth reviewing the orthotic to try to improve the mechanics again. May affect the restless legs.

His metatarsalgia possibly caused by kind of degeneration of those 1st, 2nd and 3rd MTPJs.

What state is the foot in, in terms of mobility? Is it, is it dropped an unsupported or is it dropped and fixed?

Consider looking at barefoot options? If he has a problem with the foot that is over pronating, moving him to a mid-foot/forefoot strike is going to stimulate tib post and other anti pronator muscles, which could start to support the ankle better, could modify the kinematics of the legs, could take pressure off the iliotibial bands.

If foot is dropped and stuck/restricted aim is to break it down, get some free movement into the midfoot. Anti-pronator muscles being asked to perform some of the function that the plantar fascia. In theory, support the arch artificially and allow the plantar fascia to shorten and remodel.

One "barefoot" show company is Vivo Barefoot.

Hydration/quinine? Not the most clinical of tests but could suggest tonic water as a drink, because you get hydration and quinine. Fairly inexpensive way of getting a small dose of quinine and high dose of water into a patient over a couple of weeks. Tonic water must obviously contain quinine.

Note: The amount of quinine in tonic water is not likely to interact with a person's medication or cause issues for people with medical conditions (Source: Medical News Today)

Possible that urination can sometimes help RLS (no idea what the connection is).

Sodium regulation connected to RLS. Dietary warnings often revolve over "too much salt" in diet. High and low sodium content in the body can be contributory.

Diet and RLS: Cleveland Clinic blog

Consider over-hydration. Drinking too much water could be affecting his electrolytes and sodium level. Consider balancing electrolytes and check for low iron.

Eat a banana every day to try to help to address the sodium/potassium balance.

Just a hypothesis. There may be some compression going on in the lumbars affecting the dura, resulting in sympathetic stimuli into the leg.

Cranial route could be useful.

Acupuncture: a good chance of trying to just kind of equalize things using that and using a structural approach.

Case 2 – Peripheral Paresthesiae

Patient:

- 62 y/o male retired deskworker.
- Paresthesiae all distal extremities. Onset 18 months ago in left foot, then spread to left hand then right foot and hand, gradually spreading proximally.
- Has had 2 x full investigations by neurologist incl. nerve conduction studies and brain scans. NAD.
- Has not had lumbar puncture but told it is not MS.
  Has been tested for B12, and other deficiencies, still NAD.
  Also has 15 yr history of occipital headache, giving tension into frontal area.
  I have Sent for cervical MRI (results not yet received).
- No other imagery, no meds.

Discussion:

No formal diagnosis yet.

Any breathing difficulties?

No

Guillain-Barré Syndrome? Symptoms fit with it, but the timescale doesn't. The longer it is in the onset, the longer it lasts.

Neck and shoulders? Almost too much of a coincidence that he's had headaches involving the base of the cranium from the occipital area right through to his frontal bone. From a cranial perspective, there could very well be tension in his suboccipital muscles involving neck and shoulder muscles. Occipital bone and meninges. The tentorium through the falx goes right through to the forehead. If the sub suboccipital muscles are chronically shortened it will transfer tension right through to the inside of the rorehead and orbit.

Has had needling into the suboccipitals and traction of neck

Circulatory issue - are distal extremities cold?

No, they're not cold. Nor are they overly warm

Coordination issues?

No, it's very strange. His gait is fine. His posture's fine. Not really tight anywhere.

B12 deficiency?

Has had full blood, full blood count – everything NAD.

Check APM discussion with Tracey Witty re B12. Her website: B12 Deficiency. Also, according to Simon Billings, check blood or urine MMA. He's suspicious that the active fraction test is not reliable. So he uses homocysteine and MMA. He always gives a trial of active B12, 5,000 microgram with folate.

> *B12 symptoms are a spectrum, gross neuro sx present late, (anemia often very late or never thanks to folic acid fortification in foods)they start with low grade fatigue and pain, the nerve issues lower the pain threshold so previously asymptomatic dysfunction starts to hurt but it presents a regional neuro-mechanical dysfunction and its hard to therefore pick it (though the fail ro respond as expected). as they progress its starts to become more bilateral and normal tissue starts to hurt as the nerves really go and they get depressed/anxious/brain fog as inflammation raises as homocystine starts to go up, and neurotransmitter levels drop.*

Are symptoms consistent or do they vary?

> *Consistent day and night, likewise headache has been constant for 15 years.*

Developing syrinx or spinal lesion of some description?
More or less active than when he was working?

> *Probably slightly more active. Not overweight. Not a gym bunny. Nothing unusual, no falls or accidents. Can't put it down to anything. He just woke up one morning with a numb and tingling left foot and it's just carried on spreading since then.*

Standard, age-related degenerative change? Provoking inflammation/fatigue/guarding? Age not always indicative - spinal stenosis possible in a 30 year old.

Mental health? Is he a happy retiree? Does he have any stress or any trauma that you're aware of?

> *He seems quite relaxed about it. He's glad to take early retirement.*

Maybe he needs to activate more. Has he tried changing things up at the risk of provoking things?

Charcot-Marie-Tooth? Any evidence of peripheral muscle wasting?

> *Doesn't seem to be - he's quite chunky, reasonable tone.*

Note: pt was sent to AECC for MRI. Provided patient consents, images will be shared when available.