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This changed my practice

Literally. Completely! Regenerative therapy and its place in orthopaedic medicine is an exciting development.

What I did before
When a patient presented with musculoskeletal symptoms, I would make sure there were no “red flags”, see if there were any hints as to the diagnosis (eg nail changes or rash pointing to psoriatic arthropathy), find out the level of fitness (athlete vs more sedentary) and treat with non-steroidal anti-inflammatories, other pain-killers and ice/heat. Sometimes I would also inject steroid or hyaluronic acid into a joint, and sometimes I would give the patient acupuncture if they wished. For neurogenic pain I would use medications like Gabapentin, Topiramate or Amitriptylene. If things didn’t settle down, they would be referred to physiotherapy, and I would obtain imaging. If the symptoms persisted the patient might be referred to my sports medicine and orthopaedic colleagues if indicated.

What changed my practice
My interest first in acupuncture came from a desire to help patients deal with pain without resorting to large numbers of medications on a daily basis, and a wish to decrease the huge amount of narcotic prescribing in Canada. I still use acupuncture especially for autonomic system symptoms but my results using acupuncture for MSK pain were not consistently effective. Studies are showing physiotherapy might be better than steroid injection in the long-term for lateral epicondylitis, and hyaluronic injection results have been variable and often quite disappointing. In recent years I learned how to inject trigger points. Then I began training in prolotherapy. Not that long ago I didn’t even know what this was; my meager information about the technique was that it “firmed up ligaments” – surely that was a bad idea when dealing with elderly patients who were already stiff! And if muscles are in spasm, trigger points to release the muscle seemed more intuitive. However, I looked at the literature and noted there are published studies* showing benefit. I attended the Hackett Hemwall Patterson Foundation annual conference and workshop on prolotherapy and this proved to be the best continuing medical education I have ever attended. It is run by the University of Madison, Wisconsin. I learned how to begin treating patients with prolotherapy, a “simple, elegant and safe” procedure to quote Dr Patterson. Prolotherapy involves injecting a slightly irritant substance, usually hypertonic dextrose, into entheses and into joints. This is often done monthly for as long as necessary – anywhere from one to several treatments with an average of around 3 – 6. The result of the hypertonic solution is to cause an acute new inflammatory response, which coupled with some microscopic bleeding from the needling leads to the release of growth factors. This in turn leads to the production of collagen and

fibrin, new tissue formation, and a stronger attachment of a weak or stretched ligament, or a less painful arthritic joint.

In addition to prolotherapy, there are other helpful non-pharmacological treatments for musculoskeletal pain, including perineural injecting of isotonic dextrose (aka neural prolotherapy or the Lyftogt approach) for a very effective method of treating neurogenic pain, and platelet rich plasma (PRP), a way of depositing a concentrated amount of platelets into an injured or arthritic site, providing a wealth of growth factors ready to lead the healing cascade. Ultrasound guidance is very helpful in certain situations as in injecting around the ribs, hip injections, with nerve blocks, and caudal epidurals. No longer are ultrasounds only found in radiology departments. Prolotherapy, perineural injecting, acupuncture and PRP are not covered by MSP and the patient has to pay privately for these services. Trigger point injections, nerve blocks and epidurals are covered by MSP other than the use of supplies for the procedures.

What I do now
After many years of general practice I now run a clinic offering the above approaches to the problem of pain. Here are some examples:

- Knee arthritis in a patient: prolotherapy
- Neurogenic pain: perineural injecting, peripheral nerve block or acupuncture; there is often a neurogenic component to many types of MSK diagnoses
- Muscle strain: trigger point injecting
- Athlete who wants quick results: platelet rich plasma
- Whiplash: combination treatment
- Subacromial bursitis: could be steroid injection (guided by ultrasound)

My reward: the photo of the mountain lake that someone could hike to now she has improved so much; the 80+year old who is able to walk down her driveway without pain to fetch the mail; the construction worker who is able to work at his job without constant pain; the look of relief on the faces of the depressed who have been living for a long time with pain; the spinal stenosis patient who can walk longer intervals after epidurals; and the long wait for joint replacement no longer quite so bad now the pain has decreased. Of course not everyone gets better. But most of us offering prolotherapy and perineural injecting get about 80% or more improvement to a better level of functioning – I haven't experienced these kind of results in many years of medicine, and certainly not with many pharmacological treatments!
My advice: take the course, and renew your love of medicine!

*Footnote:
There is solid research in the field of prolotherapy and PRP, and growing clinical experience with perineural injections using dextrose. The studies are not

necessarily large but are statistically significant. There is no big pharma money for studies not involving a drug, so there will never be studies with large numbers for this reason. But there is a dedicated cohort of researchers in the field who have shown the evidence we like to see.

References:

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5) Campbell KA, Saltzman BM et al. Does intra-articular platelet-rich plasma injection provide clinically superior outcomes compared with other therapies in the treatment of knee osteoarthritis? A systematic review of overlapping meta-analyses. Arthroscopy 2015 May 29. Pii: S0749-8063(15) 00353-9 PubMed http://www.ncbi.nlm.nih.gov/pubmed/26033459

6) www.drreeves.com details prolotherapy and perineural research quite comprehensively

Bio and disclosures:

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No disclosures

Jannice Bowler graduated from the University of Cape Town, and pursued a rotating internship in the UK. After moving to Canada she practised full-service family medicine for many years always with an interest in pain management. After further training in prolotherapy, perineural injections, peripheral nerve blocks, ultrasound-guided procedures, trigger point injections, caudal epidurals and acupuncture, she together with her husband (also a GP involved in pain

management) opened their own pain clinic in Victoria BC for patients with musculoskeletal pain.