Peripheral Nerve Work – Compare and Contrast

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I attended Dr. Jean-Pierre Barral's class on peripheral and cranial nerves in 2005. At that time I'd been Rolfing® twenty-seven years. The discovery that nerves were 1) palpable, 2) manipulable, and 3) the source of many skeletal distortions, made a sudden and profound impact on the way I interacted with tissue. Christoph Sommer has written an excellent review of Jean-Pierre Barral's Manual Therapy for the Peripheral Nerves (see page 42). I want to second his recommendation, as I find the book rich in detail and a thorough presentation of both the physiology and anatomy of the nervous system. There are, however, a few places of confusion which I suspect may be due to translation, and I'd advise having an anatomy text handy as the descriptions will occasionally go beyond his diagrams (even if you think you know your anatomy).

After taking the class with Barral, I began an intensive literature search to find out why what I was finding was happening. This included the medical literature on neurogenic inflammation and some pioneering work by a group of Australian physical therapists. I've made some adaptations that, I think, make the work more applicable to structural integrators, and I've borrowed some techniques from other sources. With this overall affirmation of Barral's work in mind, there are areas of distinction and contrast with my approach that I'll discuss below. These involve goals, assessment, and technique.

GOALS

Barral's goals appear unchanged from the first class I took with him twenty years ago – to make the most precise intervention possible to accomplish the most general change or, as he once put it, to find the least secondary cause. As I began to work with what I'd learned, I found that neural restrictions were often mechanically, as well as neurologically, responsible for postural limitations.

While Barral's work concentrated on lesions and restrictions close to the spine and cranium, I began to explore the other end, the restrictions at the distal end of the extremities. This was a domain I understood and where the effects of nerve lesions offered limitless possibilities for study. For those who follow the footsteps of Dr. Ida Rolf, proper function of the joints of the feet and knees, for example, is essential to stability in the pelvis and spine. Proper functioning of distal joints is directly related to the ability of the nerves that serve them to stretch and to glide within their surrounding tissues.

In contrast, in my approach to the nerves, my immediate goal is less global than Barral's. It is to free the nerves to free the joints to allow the body to move to neutral. The fact that freeing nervous tissue is also a great way to relieve pain is not lost here.

ASSESSMENT

Barral presents a wide range of assessment techniques, probably the most famous of which is "local listening". I use listening techniques in my practice, and talk in my classes in a less technical sense about "listening to the tissue". However, I began to search for ways to more rapidly determine what functions were compromised, and I found that it was often at the distal joints that compensation began.

I borrowed a tool from the Australian physical therapists, who assess glide directly by flexing joints at the ends of a nerve and following the resultant movement of the nerve affected by the joint movement as it passed through the tissue. I was able to pare down their techniques to help me rapidly find where a nerve is limiting joint motion, which is frequently just proximal to the joint in question.

I discovered another assessment tool quite by accident. Researchers refer to "arborization" of nerve tissues – which is the tendency of the nerve to grow longer when it is inflamed or when it has inflamed surrounding tissue. The inflammatory chemicals trigger the release of a substance called "nerve growth factor" (NGF) from local immune cells. Affected nerves not only grow, they can often double in length (at least insofar as I am accurate in my assessments capabilities). Shortly after reading about it, I began to find nerves that had grown into areas where there are no nerve trunks, and in doing so had become rooted, as it were, in their new home. This limits glide and is an important source of pain.

TECHNIQUES

Much of Barral's focus is on the neural "buds" – restrictions close to the spine and at places where the nerves penetrate the fascia. The technique has profound effects both downstream and upstream – in the central nervous system. For my purposes, freeing restrictions close to the spine was sometimes less effective than finding the tethered places at the distal joints. As my work developed, I found I could accomplish more from a structural perspective by first relieving tethered nerves and reducing the inflammatory cycle distally, and later relieving the midline structures as the noise of the peripheral inflammation subsided.

The "inflammatory cycle" I mentioned could be better explained. Prolonged pain causes a response in the spinal cord which triggers the release of inflammatory chemicals in peripheral tissues – and typically within the nerve bundle itself. Inflammation in the enclosed space of the nerve bundle causes nerve cells to fire from the middle of the axon (not from the ends of the fibers as they do normally). If the cells are motor neurons, it causes muscle spasm. If they are nociceptors (pain fibers), the firing (typically) causes increased pain. The pain causes more inflammatory chemicals to be expressed. So a cycle of pain and inflammation is created, which must be interrupted.

CONCLUSION

Nothing in what I've said should be taken as a criticism of Barral's work. (I am critical,

only in certain spots, of his translator.) He has initiated a practice that will have far-reaching effects as we learn more how to therapeutically engage this particular organism we've chosen to study. I've been using this approach for three years. Now my structural work centers around changes in neural tissue. The result, both for myself and for many of my students, has simplified and eased the job of changing structure. In the introductory class I teach I am able to work with newer Rolfers to integrate the neural perspective into the ten-session format.

Don Hazen was certified as a Rolfer™ in 1978 and received his Doctor of Chiropractic degree in 1994. He teaches a two-level course entitled The Neurology of Posture. More information can be found at his website at: dhazen.com/neuropages/neurology.html.