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CranioSacrally Speaking: A Natural Approach to Degenerative Diseases of the Central Nervous System

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As a complementary care practitioner with a long history in the medical field, I tend to look at trends in medicine with a broader eye than some mainstream physicians. With all the press these past few years on degenerative diseases of the central nervous system (CNS) - Alzheimer's, Parkinson's, senile dementia, and the like - I'd like to weigh in on noninvasive options in therapeutic care. It's vital for clients to have choices.

Research indicates that a significant number of degenerative brain diseases are caused by the accumulation of waste products generated by physiological reactions that involve brain proteins. This particular waste product is called "beta amyloid peptide" (BAP). The peptide is formed from a protein called "amyloid precursor protein" (APP), which is a constituent of the neural cell membranes of the brain, spinal cord and spinal cord roots. Toxic levels of the peptide can also be formed from the accumulation of heavy minerals such as mercury, aluminum and cadmium. (Some authorities suggest this abnormal accumulation of BAP results from genetic mutations. The jury is still out on that concept.)

Beta amyloid peptide products accumulate at toxic levels more often in the brain than in the spinal cord and its roots. Yet when abnormal accumulation does occur in the cord or roots, degeneration that histologically resembles that of the brain does occur. In any case, the formation of BAPs from APPs is physiologically normal; however, when BAPs are neither removed as waste nor neutralized by normal biochemical reactions, CNS diseases can occur.

No matter the reason, the abnormal accumulation of BAPs may result in the formation of extracellular amyloid plaques. The presence of these plaques can then induce the inflammatory response, which facilitates the hyper-phosphorylation of a protein named "TAU." While still under study, we know TAU forms intracellular fibrillatory tangles. Between the plaques and the tangles, the neurons become dysfunctional and may die. In

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addition to producing plaques and tangles, BAPs can: 1) interfere with the proper functioning of voltage-dependent calcium channels, usually causing neuronal hyperexcitability and ultimately death, and 2) enhance the activity of an enzyme known as "GTPase," the hyperactivity of which then interferes with long-term potentiation at the synaps, which results in memory failure.

The production of BAPs depends on the presence of APP, which is an integral cellular-membrane protein. It has three different isoforms made up of either 695, 751 or 770 amino acids. It also has a large domain outside of the cell. The extracellular portion is connected to a smaller intracellular portion by a part of the molecule that passes through the cell membrane, thus forming a connection between the extracellular and intracellular parts of the molecule. Since both parts have receptors, APP passes information between the extracellular and intracellular domains of the molecule; hence, between the extracellular and intracellular regions. In view of all this, it's clear that the major causes of degenerative diseases of the CNS include the incomplete removal of BAPs and excessive inflammatory responses.

Certainly, biochemicals that have been used to treat these conditions (neprilysin, insulin degrading enzyme, endothelial-converting enzyme and plasmin) have been moderately successful in terms of slowing the disease processes. But what about approaching the situation by using hands-on therapeutic techniques that physiologically remove the culprit molecules, namely the beta amyloid peptides?

It seems to me that using approaches such as massage and CranioSacral Therapy (CST) to enhance the flow of fluids that pass through the interstitial spaces of the central nervous system would be of great therapeutic value. If we could help the body obtain a proper balance through these techniques, the accumulation of BAPs would naturally be reduced. One of the major goals of CST in particular is to enhance the flow of cerebrospinal fluid through the craniosacral system, which surrounds the brain and spinal cord. We accomplish this by releasing any membranous tensions that restrict the easy, natural, rhythmical motion of the craniosacral system. When the craniosacral system is operating at a high level of efficiency, the accumulated BAP waste is flushed from the interstitial spaces of the central nervous system and excreted from the body. Thus, a major contributing cause of degenerative diseases of the brain or spinal cord is eliminated.

Yet even preventing further degenerative changes will not restore neurons, neuronal circuits and glial cells that have already been lost. How can manual therapists help restore these losses? Personally, I incorporate CST with SomatoEmotional Release and dialogue techniques to "talk" with the stem cells that are already numerous in the brain and spinal cord. First, I humbly and

respectfully describe the functional losses of the central nervous system to the stem cells.

Next, I politely request that these stem cells replace lost neurons, circuits or what have you, as they see fit. It's important to understand that I do not tell them how to do it. I only describe the problem and ask that the stem cells apply their wisdom and ingenuity to do whatever they feel is appropriate and necessary to restore normal function to the brain and spinal cord.

For those of you willing to venture with me into new areas of thought and therapeutic care, you'll find yourself able to render valuable services to clients afflicted with a wide range of degenerative diseases of the brain or spinal cord. And isn't that where the true value lies?

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