The Society for Homotoxicology Annual Symposium. Sports Injuries & Immunology

24th April 2010.

The Symposium from a podiatric perspective

Colin Perry, Podiatrist and Clinical Director, Mount Row Foot Clinic, Guernsey

In April 2010, I was fortunate enough to attend the Annual Symposium of The Society of Homotoxicology at The Royal College of Physicians in London. The event was hosted by Roger Wilson from Bio Pathica Limited, a British Company that retails anti-homotoxicological medicines produced by the Heel Company in Germany. It was a friendly informative gathering with a marvellous lunch.

The first lecture was given by John Andrews, an international lecturer and author. His talk concerned his work in the field of iridology and the developing science of psychoneuroendocrinoimmunology abbreviated as PNEI. John maintains that clinical studies, in this area to date, confirm that the immune system does not function autonomously.

It should be acknowledged that emotional stress can have a profound effect on the individual. PNEI attempts to validate the psychosomatic mind-body approach to medicine. It recognises the epigenic impact and inheritance theory and contemplates the impact of genetic inheritance from previous generations. Emphasis is placed on the limbic system and the emotions via the hypothalamus.

John explained that, in his opinion, sports medicine is not only involved with structural injuries such as sprained ankles and torn tendons, but also involves physiological bio-regulation, inflammation modulation, cellular nutrition, adequate hydration, PNEI dynamics and enhanced sports performance techniques. Problems can be exacerbated when there is a malfunction of the T-helper cells and if there is a compromised hypothalamic pituitary adrenal axis. Such compromise can be diagnosed using iridology and noting signs in the patient's iris. The impact of stress on our patients can delay healing after sports injuries. John emphasised that the emotional centre of the hypothalamus is important, and factors such as bereavement and negative emotional states can cause decreased lymphocyte proliferation. John's findings indicate that a 'healthy bereavement process' can still suppress immune responses for between 4 and 7 years. This suggests that that we should give significant regard to our patients' emotional status.

I personally have often noticed podiatric conditions with a psychosomatic dimension. One patient that comes to mind is a lady who came to see me with a mystery pain in the cuneiforms. It materialised that the pain started after the death of her husband a year earlier. She had not put aside time to grieve this event sufficiently, trying to keep upbeat for the sake of her family. Her loss was borne with a boisterous disposition. It was only when she took time to think about the depth of her feelings and the agony of her loss by 'having a good cry', that the pain eventually went away.

This lecture also informed us that certain factors can be easily overlooked in sports medicine. These include progesterone ratio imbalance, elevated prolactin levels, nutritional malabsorption and extracellular matrix dehydration, disturbed sleep patterns, adrenal fatigue and cortisol reversal, unresolved emotional states especially unresolved grief, hypothalamic dysfunction, intestinal dysbiosis and citric acid cycle disruption. So it appears that, as podiatrists, when we are dealing with a tibialis anterior dysfunction there are other important factors to be considered than just the muscle itself.

Anti-homotoxicological medicines claim to work on the Arndt-Shulz rule. The basic explanation to this is: small doses of a single substance stimulate, moderate doses of the same substance can inhibit and large doses can stop physiological processes (or even kill). John claimed that research in immunology and PNEI demonstrates that a typical human cell has approximately 1000 receptor sites, and only 10-20% of these receptors have to be occupied or engaged at any specific time. Up to 50-60%

Colin Perry with Dr Ivo Bianchi

structurally similar to germinal centres, which strongly supports the theory that this disease is an antigen-driven immune response.

Psoriasis is a chronic, clinically variable, inflammatory disease of unknown aetiology. It primarily affects the skin and joints and like rheumatoid arthritis is often found in the feet. A cure for the disease has still to be discovered. The disease is chronic, and currently available conventional treatments are associated with serious morbidity.

Psoriasis is considered to be an autoimmune disorder, and a complex network of cytokines and chemokines mediates the pathological reaction. The abnormal function of psoriatic regulatory T-cells is responsible for the chronic nature of psoriasis. Ivo concluded that psoriasis is associated with metabolic syndrome and increased cardiovascular risk depending on the severity of the disorder. Psoriasis in the skin and joints may represent a relevant healthcare issue as a diagnostic indicator to underlying systemic inflammation.

The next speaker was Karen Devine. Karen has been working in the field of nutrition for over a decade and is a regular speaker in her field. Her talk was centred around the importance of nutrients in sports medicine. Her presentation convinced me that I was doing the right thing by referring some of my podiatric patients to a nutritionist.

Karen maintains that between 25% and 50% of 'elite' athletes are hampered by gastrointestinal problems. Secretory IgA is important as it protects the mucosal surfaces and prevents pathogenic activity. It was suggested that excessive exercise, instead of being beneficial, could well be detrimental. Intense physical exercise is associated with both transient and chronic

Colin Perry with Roger Wilson from Bio Pathica

suppression of several immune factors, including Secretory IgA. Karen then explained how she treated stressed athletes by using appropriate prebiotics to feed favourable strains of bacteria and probiotics to help digestive distress. She underlined the importance of serotonin and other neurotransmitters and how their increased secretion under stress caused gastric intestinal problems. She illustrated her talk by explaining how she treated a Tour de France cyclist with severe diet and digestion problems.

The next speaker was an osteopath called Jonathan Lawrence, and his talk was titled 'Twist and Shout'. Firstly, he explained the differences between the reductionist approach of conventional medicine and the holistic approach of complementary medicine.

He explained that, in his opinion, reductionism is machine like, has chains of cause and effect, is deterministic, it explains using the terminology of classical physics and chemistry, maintains that living systems obey the laws of thermodynamics, it attempts to organise and believes in certainty. On the other hand, holism conceives an undivided whole, suggests interdependence, is probabilistic, explanations are given in terms of quantum physics: living systems exist beyond the thermodynamic equilibrium, and there is self-organisation and uncertainty. Jonathan talked about prevention of sports injuries by introducing training regimes to suit specific modalities. General fitness needs to be maintained, along with good nutrition, rest and recovery, positive mental attitudes and flexible training to keep the body 'interested'.

Acute sports injuries are often due to a single cause, there is redness and they are painful. Fortunately, they often have a quick resolution. Chronic injuries can be possibly multi-factorial: the site of the injury is often pale and achy, and they can take a long time to resolve. The types of injury we see in daily podiatric practice can involve ligament strains, cartilage tears, stress fractures and shin splints.

Emphasis should be placed on encouraging correct diet and discouraging over training which can result in 'burn out' and may predispose chronic fatigue syndrome or fibromyalgia. Jonathan discussed the immune system in detail and highlighted the need to prevent an immunological stress reaction. Immune rigidity can result from suppressive medicine such as vaccinations, NSAIDs and antibiotics. It can also be induced by poor nutrition and excessive exercise.

His talk then turned to the subject of tensegrity. This can be defined as tensional integrity within the body. Body structures are integrally balanced when there is synchronicity between components of tension and compression. Icosahedrons are used to model biological organisms from viruses to vertebrates, their cells, systems and subsystems.

In the gross structure of humans, there must be a balance of compression elements and tension elements between bones and soft tissues. If this balance is compromised, problems can easily result. Attention should also be paid to the body's 'micro' tensegrity.

Jonathan talked about the importance of a good functional balance within the cells and extracellular matrix and considered factors such as the importance of the cytoskeleton and the nuclear matrix of the cells. He concluded by suggesting various anti-homotoxicological remedies for different types of injury.

The final talk of the day was given by Richard Holding, another osteopath, who is active on the international lecture circuit. His talk concerned the exploration of muscle weakness as an indicator of acupuncture meridian imbalance, as an indicator of organ imbalance, or as an indicator of hidden infection that weakens the muscle in the same way that a fuse blows to protect the wiring.

Firstly, Richard talked about free radical trauma in exercise. He attributes many sports injuries to too many carbohydrates in the diet, which reduces the resistance to

need to be stimulated to initiate a positive healing stimulus. This principle is deemed to be extremely important in modern homotoxicology and medicine as a whole.

Good sleep patterns are also important for health and healing. Cortisol can disrupt pyruvate pathways in the citric acid cycle. Disturbed sleep patterns can disturb the natural cycle of cortisol levels. Ideally, John maintained, our cortisol levels should be high when we get up in the morning and at their lowest around midnight. Cortisol is a catabolic hormone and testosterone is an anabolic hormone. They both share receptor sites in the muscles. When cortisol levels are chronically elevated it can displace testosterone, which can give rise to under-performance and atrophy of muscles. Impaired recovery from injury can result. Cortisol also contributes to faulty immune responses. The T-helper cell rigidity that results, can give rise to chronic inflammation, tissue acidity and cellular immune dysfunction.[1]

To assist in improving matters and speed up healing, John Andrews highlighted the benefits of hypnosis and relaxation, humour and laughter, and sharing and caring plus other positive factors that could be of benefit to the healthy healing of our patients with sports injuries.

The next talk was given by Dr Ivo Branchi, an international expert from Verona in Italy, on the role of homotoxicology in immune disorders. During the lecture Ivo covered a lot of ground, so I will try to tie together the material that could be useful in podiatry. He started the talk with an overview of the immune system and its functions. The immune system is composed of many interdependent cell types and organs. He holds that low-dose medicines such as anti-homotoxicological remedies can influence the activity of these cells and organs.

The innate immune system is the first line of defence. It consists of soluble factors such as complement proteins, interferons and diverse cellular components such as granulocytes, mast cells, macrophages, dendritic cells and natural killer cells, with increased antigenic specificity and memory. It has a quick generic action.

The adaptive or acquired immune system has a slow specific action, and consists of antibodies, B cells, CD4 and CD8 T-lymphocytes. T-lymphocytes are the part of the adaptive immune system involved in cell-mediated immunity. The function of T-cells is to recognise specific 'non-self' antigens during the antigen presentation process. Once they have identified the unwanted invader, T-helper cells generate cytokines that direct the immune response. Cytotoxic T-cells produce toxic granules, which induce the death of the pathogen-infected cells. B-lymphocytes are also part of the adaptive immune system, and their role is to recognise specific 'non-self' antigens.

They operate by identifying the invader and then generating specific responses, producing large quantities of antibodies which then neutralise foreign objects such as bacteria and viruses.

Both T-lymphocytes and B-lymphocytes leave a lasting legacy of the antigens that they have encountered. Throughout the lifetime of the individual, T-memory cells will 'remember' each specific pathogen encountered and will mount a strong response if the pathogen is detected again.

It was then stated that the effects of ageing take their toll on the immune system. All cells of the human immune system are found in the bone marrow. Hematopoiesis produces both mature and immature immune cells. The immature ones migrate to organs such as the thymus gland where the maturation process is completed. Ivo then explained that a major problem with ageing is an unexpected failure of the bone marrow to produce progenitor cells that are needed to repair and rejuvenate. The function of the thymus gland is to produce mature T-cells, and its degeneration results in an increase in autoimmune disorders, which are seen in the older population.

The spleen acts as a immunologic filter of blood, and is composed of T-cells, B-cells, natural killer cells, macrophages, dendritic cells and red blood cells. The spleen is responsible for the production of large levels of antibodies. As the spleen ages, its efficiency declines. Lymph nodes situated around the body are also immunological filters, and ageing can decrease their viability.

Dr Ivo Branchi then talked about how the immune system dealt with various bacterial and viral infections that we see on a day to day basis in the podiatry clinic. He explained his theory of how homotoxicology could be used to support the ageing or compromised immune systems.

Finally, Ivo turned his attention to various autoimmune disorders. The two mentioned that have considerable relevance in podiatry are rheumatoid arthritis and psoriasis. Current understanding of rheumatoid arthritis suggests that the TH1 cells (T-Helper cells) that are specific for an antigen (not yet identified), are present in the joints of people suffering from this condition. This antigen activates T-cells to release lymphokines, which cause local inflammation at the joints.

The T-cells are the dominant category of cells that infiltrate the synovial membrane in rheumatoid arthritis. Lymphocytes that infiltrate the tissues are organised into follicles that are

Homotoxicology

Homotoxicology was first formulated by Dr Hans-Henrich Reckeweg in 1952. This conception was developed from homoeopathy for the purpose of providing a holistic perspective on the synthesis of medical science. Anti-homotoxic preparations can be applied orally, parenterally, or locally/externally. Their usage can be easily incorporated into complementary podiatry practice if the practitioner wishes to do so.

Colin Perry (right) with Jonathan Lawrence (left)

MUSCLE GROUP	ORGAN RELATIONSHIP	MERIDIAN RELATIONSHIP	REMEMDIES
Hamstrings: semitendinosus semimembranosus biceps femorus	Rectum	Large intestine	Nux Vomica Homaccord, Podophyllum Compositum
Tensor fascia lata	Large intestine	Large intestine	Same as above
Quadriceps: rectus femoris vastus medialis intermedius & lateralis	Small intestine	Small intestine	Nux Vomica Homaccord, Duodenoheel
Psoas iliacus	Kidney	Kidney	Solidago Compositum, Ren Suis-Injeel, Molybdan Compositum, Berberis Homaccord
Popliteus	Gall bladder	Gall bladder	Chelodonium Compositum, Hepa Compositum
Tibialis anterior peroneus tertius peroneus longus & brevis	Urinary bladder	Bladder	Berberis Homaccord
Satorius gracilis Gastrocnemius tibialis posterior	Adrenal	Circulation Sex	Cimicifuga, Berberis Homaccord
Flexor hallucis longus	Anterior pituitary	Circulation sex	Cimicifuga Hypophysis Suis Injeel, Hypothalamus Suis
Flexor hallucis brevis	Lung	Circulation sex	Mucosa Compositum, Tartehedreel

free radical formation and thus the increased chance of cell injury. Muscles have a high metabolic turnover, so some of the molecular oxygen will become 'active oxygen species'. If any of these radicals escape scavenging, they can attach to a lipid, nucleotide or protein and then set up a chain reaction by reacting with oxygen. This will cause an inflammatory response.

Aerobic exercise is very important and many people who take to jogging and exercise on sports equipment don't do enough of it. They simply don't get out of breath. Aerobic exercise is achieved by raising the pulse with vigorous exercise and, if people have been anaerobically exercising, they need to build up their level of aerobic exercise, otherwise they are prone to develop anaerobic pathology. Too little aerobic activity leads to the body burning sugar and storing fat, mental and physical fatigue, hypoglycaemia, mood swings, tendency for injury exercising and hypoadrenia.

Aerobic exercise gives rise to normal adrenalin levels and high noradrenalin levels, but excess anaerobic exercise produces high adrenalin levels with normal noradrenalin levels. Richard explained that this latter state of affairs was undesirable. He emphasised the importance of a good vitamin C intake and warned about not taking in too much sugar. It was suggested that fruit juice should be diluted 1 part juice to 4 parts water before consumption to keep sugar levels down.

We were then introduced to the concept that muscles can act as a protective mechanism. Richard explained that each muscle is said to have a relationship with an acupuncture meridian. Each meridian has a relationship with several muscles. If an organ gets stressed, the muscle can be turned off (becomes weakened) to spread the load of the stress and hence protect the organ from being 'burned out'.

Richard concluded by giving us a chart relating muscle groups to organs, the associated meridians and ideas concerning what anti-homotoxicological remedies to use.

In the table I have included only the muscle groups found in the leg and foot as these will be of most relevance in podiatry.

Reference

1. Smit A, *et al, Introduction to Bioregulatory Medicine*. Thelme 2009.

Further information

Further information regarding anti-homotoxicological preparations is available at www.biopathica.com