



*XI° CONGRESSO
ASSOCIAZIONE
MANIPOLAZIONE
FASCIALE*



“PHYSIOLOGY OF FASCIA”

**Fascial Manipulation Institute by Stecco
Via Cavalieri di Vittorio Veneto 19 (PD)
Padova, 01 Giugno 2019**





XI CONGRESSO

ASSOCIAZIONE MANIPOLAZIONE FASCIALE®

“Physiology of Fascia”

Fascial Manipulation Institute by Stecco

Via Cavalieri di Vittorio Veneto 19, Padova, 1Giugno 2019

Traduzione simultanea in ITALIANO, INGLESE e CINESE

08.00 - 08.30	Registrazione partecipanti			
08.30 - 08.40	Benvenuto: Luigi Stecco			
08.40 - 09.05	“Fascial Manipulation vs. standard physical therapy practice for low back pain diagnoses: A pragmatic study” Steinbeck Larry			
09.05 - 09.30	“Myofascial and acupuncture” Guan Ling			
09.30 - 09.55	“Innervazione dei tessuti della regione dell’anca: studio comparativo” Caterina Fedè - Carla Stecco			
09.55 - 10.20	“Evaluation of hyaluronan content in areas of densification compared to adjacent areas of fascia” Emmett J. Hughes & Kena McDermott			
10.20 - 10.40	Discussione (Sli.do application)			
10.40 - 11.10	Coffee - break			
11.10 - 11.20	Assegnazione Premi AMF 2019			
11.20 - 11.35	Presentazione orale: 1° premio AMF : “Fascial Manipulation versus conventional TMJ treatment: RCT in algometer and EMG” (F. Sekito & M. Pintucci)			
11.35 - 11.50	Presentazione orale: 2° premio AMF : “Evaluation of influence of the Fascial Manipulation Method (therapy of the receptor sequence) on acquired Myopia at teenage children”. (M. Sternak, J. Ciechowski & K. Waligóra)			
11.50 - 12.05	Presentazione orale: 3° premio AMF : “Experiences of Fascial Manipulation Stecco in neurological physiotherapy for children and adults” (N. Tolvanen)			
12.05 - 12.20	Discussione (Sli.do application)			
12.20 - 12.30	Celebrazione degli “Specialisti Certificati MF” 2019			
12.30 - 13.00	Assemblea Annuale dell’AMF (solo per i soci)			
13.00 - 14.30	Pausa Pranzo (offerta da AMF)			
	Workshops			
14.30 - 17.30	Gruppo A Presentazione della Scuola “Manipolazione Fasciale” (Lingua italiana) Stecco C. Stecco L.	Gruppo B Trattamento del Sistema muscolo-scheletrico (Lingua italiana e inglese) Giacomini S. Casadei S.	Gruppo C Trattamento delle disfunzioni interne ed approccio terapeutico di casi complessi (Lingua italiana) Depriori G. Motton F.	Gruppo D Trattamento delle disfunzioni interne ed approccio terapeutico di casi complessi (Lingua inglese/cinese) Pasini A. Stecco A.



XI CONGRESS

FASCIAL MANIPULATION® ASSOCIATION

“Physiology of Fascia”

Fascial Manipulation Institute by Stecco

Via Cavalieri di Vittorio Veneto 19, Padova, June 1st 2019

Simultaneous translation in ITALIAN, ENGLISH and CHINESE will be provided

08.00 - 08.30	Registration			
08.30 - 08.40	Opening: Luigi Stecco			
08.40 - 09.05	<i>“Fascial Manipulation vs. standard physical therapy practice for low back pain diagnoses: A pragmatic study”</i> Dr. Steinbeck Larry			
09.05 - 09.30	<i>“Myofascial and acupuncture”</i> Prof. Guan Ling			
09.30 - 09.55	<i>“Innervation of various tissues of the hip regions: comparative study”</i> Dr. Caterina Fede - Dr. Carla Stecco			
09.55 - 10.20	<i>“Evaluation of hyaluronan content in areas of densification compared to adjacent areas of fascia”</i> Emmett J. Hughes & Kena McDermott			
10.20 - 10.40	Discussion (Sli.do application)			
10.40 - 11.10	Coffee - break			
11.10 - 11.20	2019 FMA Awards			
11.20 - 11.35	1° FMA Award: <i>“Fascial Manipulation versus conventional TMJ treatment: RCT in algometer and EMG”</i> (F. Sekito & M. Pintucci)			
11.35 - 11.50	2° FMA Award: <i>“Evaluation of influence of the Fascial Manipulation Method (therapy of the receptor sequence) on acquired Myopia at teenage children”</i> . (M. Sternak, J. Ciechomski & K. Waligóra)			
11.50 - 12.05	3° FMA Award: <i>“Experiences of Fascial Manipulation Stecco in neurological physiotherapy for children and adults”</i> (N. Tolvanen)			
12.05 - 12.20	Discussion (Sli.do application)			
12.20 - 12.30	2019 Celebration of the “ Certified FM Specialists”			
12.30 - 13.00	FMA Assembly (only for members)			
13.00 - 14.30	Lunch (offered by FMA)			
	Workshops			
14.30 - 17.30	Group A Introduction about the MF School (Italian) Stecco C. Stecco L.	Group B Treatment of musculoskeletal dysfunctions (Italian - English) Giacomini S. Casadei S.	Group C Treatment of internal dysfunctions and therapeutic approach of complex cases (Italian) Depriori G. Motton F.	Group D Treatment of internal dysfunctions and therapeutic approach of complex cases (English/Chinese) Pasini A. Stecco A.



OUR SPEAKERS



Stecco Luigi: Ideatore e titolare della tecnica manipolativa di valutazione e trattamento denominata: "Manipolazione Fasciale®" "Fascial Manipulation®"- "STECCO®".
E' autore di vari libri, tradotti in più lingue.



Larry Steinbeck: Larry Steinbeck is a physical therapist in the USA residing on Canton, Georgia and working in an outpatient facility for Advance Rehabilitation and Physical Therapy specializing in musculoskeletal dysfunctions. Larry participated in the first English language Level 1 and Level 2 courses near Thiene, Italy in the summer and fall of 2010. Along with Warren Hammer, DC, he was instrumental in introducing the Stecco Method in the USA. Larry has had the opportunity to present the Stecco method through established courses, as well as, through local and international conferences.



Guan Ling: She focused on using non- pharmaceutical therapy to treat musculoskeletal pain and cancer, advocated teaching and practicing acupuncture by structural perspective evidence. She designed a series of non- pharmaceutical technologies of TCM to self-care, conducted training staff of more than 5000 people, set up an association to the promote TCM non-pharmaceutical therapy. She has won more than 8 awards in science and technology in China. Titles and Academic Participation: Director of Acupuncture and Moxibustion Dept. of Chinese PLA General Hospital; Professor and Master Tutor of Chinese PLA Medical College; Chairperson of TCM non-pharmaceutical therapy Association of APRTCM; Chairperson of Acupuncture and Moxibustion Committee of Chinese PLA TCM Association; Deputy Director of WFCMS Specialty Committee and Working Committee. Publications: Basic Kungfu of Acupuncture and Moxibustion one of the must-reads for ACMO novices and has a certain influence in the Chinese ACMO field, which has been reprinted 22 times in 10 years; Xie Xiliang's Way of Acupoints Location (DVD) ---- good example of the traditional acupoints location way; Chinese version of Anatomy Trains (the third edition) ---- it was published in the mainland of China in 2015 and Dr. Guan is the chief translator; Chinese version of Fascial manipulation for internal dysfunctions---- it was published in the mainland of China in 2017 and Dr. Guan is the chief translator; Chinese version of fascia in sport and movement---- it was published in the mainland of China in 2017 and Dr. Guan is the chief translator; Structure-based Acupuncture: Needing technique and clinical experience ---- it was published in the mainland of China in 2017 and Dr. Guan is the chief author.



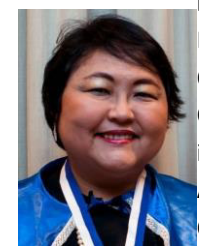
Fede Caterina: Caterina graduated in Health Biology in 2007 and received her Ph.D. in Environmental Medicine in 2011 (University of Padova), with a research program promoted by ECSIN - Veneto Nanotech Scpa. Since 2008 she has been active in supporting university teaching, in the field of Histology and Cell Biology. Actually she is a Post-Doc Researcher at University of Padova, Institute of Human Anatomy. She is author of numerous research on cellular and molecular aspects of the fascia, focused on the regulation of extracellular matrix of fascia according to hormone levels, the quantification of hyaluronan in fascia and the characterization of fasciocytes.




Emmett J. Hughes: D.C., M.S., Associate Professor of Basic and Clinical Sciences, has been teaching at the University of Bridgeport College of Chiropractic for the past 18 years. He has taught classes in nutrition, neurology, immunology, endocrinology, histology and soft tissue technique to name a few. Following a twelve year career as a special education teacher, he earned his Doctor of Chiropractic degree from the University of Bridgeport, graduating Summa cum laude and valedictorian of his class. Additionally, he has trained in Graston® technique, Fascial Manipulation (Stecco method), clinical nutrition, Optigate® system, musculoskeletal ultrasound, kinesiology taping, and classical homeopathy. He has taught post-graduate programs in soft tissue technique, nutrition, and homeopathy. His research interests include fascia, nutrition, histology and soft tissue techniques. He maintains a private practice in Huntington, NY which includes chiropractic, nutrition, homeopathy Graston® technique and Fascial Manipulation.




Kena McDermott: is a recent graduate of the University of Bridgeport School of Chiropractic. She is also completing her Master of Science degree from the University of Bridgeport in Human Nutrition. Before her career in chiropractic, she worked as a Certified Histologist managing pathology laboratories for 18 years. For 10 years she taught fixation, histochemical special staining, laboratory safety and microtomy at Marshfield Laboratories. She specialized in gross dissection, immunohistochemistry, immunofluorescence, enzyme muscle histochemistry, nerve teasing, plastic kidney biopsies, and electron microscopy. She also worked as a clinical research associate for over 2 years on pharmaceutical breast cancer clinical trials. Her areas of research include fascia, chronic pain and the role of fatty acids in inflammation.




Florence Sekito: Dr. Sekito graduated in Dentistry at Federal University of Rio de Janeiro (UFRJ), Brazil. She has Master Science in Dentistry, completing Phd program in Prosthodontics, and specialized in Neurosciences, Orofacial pain and Temporomandibular disorders. Also has postgraduate degrees in TMJ Imaginology, and Orthodontics; certification in Stecco fascial manipulation method, and Busquet physiological chains method. She is a tenured member of the #38 chair of the Dental Academy of Rio de Janeiro (AORJ), and publishing director of AORJ. She is Founder member of Brazilian Society of Orofacial Pain (SBDOF) and fellow of the International College of Dentistry. Actually is a Coordinator of Orofacial pain and Temporomandibular disorder clinic at State University of Rio de Janeiro (UERJ), Supervisor of Orofacial pain and Occlusion Discipline 2 at UERJ, and also coordinator of community attendance project and research. Her major areas of research and interests are: Orofacial pain and Temporomandibular disorders; occlusion; sleep disorders, fascial and myofascial manipulation, Stomatognathic system and posture, neuroscience, imanginology, electromyography. She is a book author and other two chapters, and a three best poster awards (one in the CHEST); eight honour title to the merit and gratitude certificate.



Stecco Antonio: Stecco Antonio, MD, PhD Assistant Professor at Rusk Rehabilitation, New York University. Physiatrist, President of Fascial Manipulation Association, Assistant to the President of the International Society of Physical Medicine and Rehabilitation (ISPRM) from 2012 to 2014. Scientific activity devoted to the study the human fasciae from a macroscopically, histologically and physio-pathologically point of view. He personally made over 100 cadaver dissections for research. From 2007 he organizes and personally holds theoretical-practical courses about the Fascial Manipulation method in all the five continents. Author of more than 40 in extensor papers about the fascia. Co-Authors of 5 books and co-author of different chapters of international books published by Elsevier.



Michał Sternak: Since 2001 I am a physiotherapist. For nearly twenty years of working with patients, I have learned that reducing pain or improving the range of motion should not be the main aim of my work. I understand the Physiotherapy as a help to people, it's something like a health guide. In working with patients, I paid a special attention to therapeutic methods that integrate a holistic approach to the functioning of the human body and treat the fascia as the main structure which connects tissues and organs. Fascial Manipulation Method has become the main tool of my work and since 2012 I have been constantly developing my therapeutic skills in this method. Since that year, I have been running, with my two friends, the HOLISTIC-Center of Miofascial Therapy, where now work eight therapists which completed all FM levels. In 2016, I became an instructor of the Fascial Manipulation Method. Every patient is always a new challenge for me and his problem is a puzzle to be solved, and that's why I know that I am practicing the best profession in the world.



Tolvanen Nita: Nita Tolvanen is an advanced specialist in pediatric physiotherapy with an extensive experience of working and lecturing about physiotherapy for children with different functional abilities. Because of her training in the NDT, Bobath + baby therapy approach she has a long experience of multidisciplinary work with children with neurological disorders. In addition, she has studied Fascial Manipulation and done pioneering clinical observations of the benefits of this method and how it can be applied in this special field. She has shared her experiences both in Finnish and in English in different publications and contributed to FM courses with neurological pediatric focus.



Presentazione dell'undicesimo congresso della Manipolazione Fasciale

Stecco Luigi

Da mio padre ho ereditato tre virtù.

Mio padre faceva il contadino, ogni anno seminava il grano e **con pazienza** aspettava il trascorrere dei mesi prima della raccolta.

Io ho seminato l'idea della Manipolazione Fasciale e con pazienza ho aspettato anni prima di vedere questa partecipazione ai congressi sulla metodica.

Mio padre spesso doveva combattere contro le avversità del tempo, come la grandine, la siccità ecc. ma **con costanza** ricominciava il suo lavoro.

Io all'inizio dell'applicazione della metodica ho dovuto affrontare degli ostacoli, ma la costanza mi ha permesso di arrivare a definire meglio i concetti iniziali.

Mio padre per far fronte, con soli 12 campi alle esigenze di ben 12 figli, ha avuto **l'inventiva** di trovare soluzioni diverse alla semplice coltivazione del grano; lui fu tra i primi ad attuare la coltivazione degli ortaggi; gli altri contadini lo guardavano con diffidenza.

Io per far fronte alle richieste dei pazienti, che cercavano una soluzione ai loro dolori, ho dovuto inventarmi soluzioni diverse dalle solite terapie ed esercizi. Chi amava il quieto vivere non accettava i cambiamenti, ma l'esempio di mio padre mi spinse ad andare avanti.

Chi oggi partecipa a questo convegno possiede certamente queste tre virtù.



Fascial Manipulation versus standard physical therapy practice for low back pain diagnoses

Larry Steinbeck

Does Treating the Fascial System Impact Patient Outcomes?

This pragmatic study compared the use of Fascial Manipulation® to “traditional” and/or “standard” physical therapy as practiced in the USA with individuals who experienced lumbar spine related disorders. Regardless of age, gender or chronicity, this study demonstrated the greater effectiveness of Fascial Manipulation® when added to treatment by reducing the number of visits required, and greater minimally clinically significant changes when using the functional outcome measures, Oswestry Low Back pain Questionnaire, Numeric Pain Rating scale and the Global Rating of Change.



Fascia and Innervation

Innervation of various tissues of the hip regions: comparative study

Caterina Fede¹, Chenglei Fan¹, Lucia Petrelli¹, Carmelo Pirri², Carla Stecco¹

¹Department of Neuroscience, Section of Human Anatomy, University of Padua, Padova, Italy.

²Physical and Rehabilitation Medicine, University of Rome "Tor Vergata", Roma, Italy.

Introduction: Fascia is mainly known for the biomechanical properties, but it also has a role in proprioception, nociception and etiology of pain, and recent evidences suggested that the fasciae are very innervated, in human as well as rat. The purpose of this study is to evaluate the distribution of innervation of fascia and soft tissues (skin, subcutaneous tissue, superficial adipose tissue - SAT, superficial fascia, deep adipose tissue - DAT, deep fascia, muscles, capsule, capsule ligament, round ligament and tendon) in the topographic region of the hip and to understand its potential role in nociception and proprioception in hip joint. This study can help to understand why persistent symptoms may remain after an otherwise successful hip replacement surgery (total hip arthroplasty or hemi-arthroplasty).

Materials and Methods: samples from 11 patients (3 males, 8 females, mean age 84.2, 7 right and 4 from left hip joint) at the Padua Orthopedic Clinic according to the approval of the Ethics Committee (AMOFA 3722/AO/16), 6 cadavers (within the "Body Donation Program" of the Department of Neuroscience, promoted by the University of Padua) and 4 rats (Institute of Human Anatomy in University of Padova according to the appropriate rules for scientific research) were taken following the Watson-Jones procedure. After fixation, sections of 5 μ m were used to analyze the distribution of nerve elements by immunohistochemistry with anti S100 antibody and anti Tyrosine Hydroxylase antibody.

Results: All the tissues involved in our study are positive for S100, and there is a similar trend of percentage of positivity for S100 in human with rat, while the cadaver results present themselves with lower values than the living patients. The skin, both in the of the human and rat, appears the most innervated (patient: $0.91\% \pm 0.39$; cadaver: $0.59\% \pm 0.43$; rat: $0.61\% \pm 0.15$). SAT, DAT and deep fascia show the same trend of innervation (around 0.3% in the patients) and the superficial fascia is usually more innervated (around 0.4% in the patients). The least innervated tissue is the tendon (patient: $0.10\% \pm 0.05$; cadaver: $0.08\% \pm 0.03$; rat: $0.23\% \pm 0.13$). Furthermore the preliminary results by anti Tyrosine Hydroxylase antibody show that there is a strong contribute of the autonomic nervous system, involved in chronic pain, chronic inflammation and vasomotor regulation.

Conclusion: Our results support a possible role of these soft tissue in the proprioception and pain and the role of fascia as a sensory organ. They lead us to conclude how important it is to save articular and peri-articular soft tissues using minimally invasive surgical procedures, with the aim of reducing post-operative pain and not losing proprioception.



Evaluation of hyaluronan content in areas of densification compared to adjacent areas of fascia

Emmett Hughes

Connective tissues between layers of fascia are rich in hyaluronan (HA), allowing normal gliding of fascial layers. Densifications in fascia have been described as areas of increased concentration of HA molecules, causing a tangling of HA chains and altered HA consistency. Restricted fascial gliding, dysfunction and pain may follow. Centers of coordination (CC), as described in Fascial Manipulation®, are specific points where mechanical forces of muscle contraction converge in epimysial fascia to coordinate joint movement in a specific plane. This study compared HA content at a densified CC to adjacent non-densified areas. The aim was to determine whether there was a visible difference between CC and non-CC sites through histological staining techniques. A CC in the muscle belly of the tensor fasciae latae was identified anatomically and marked on a human cadaver. A densification was identified at the CC by palpation before dissection. A non-densified piece of the same muscle and fascia was dissected 2 cm away from the palpated density. Tissues were sectioned and stained with Hematoxylin and Eosin. Special stains including Colloidal Iron, treated and untreated with hyaluronidase, and Alcian Blue were performed on serial sections. Compared to similar adjacent tissue, an increased presence of HA was confirmed at the CC. There was a gradual decrease in concentration of positive staining further away from the densification site. Dense blue staining was absent in tissues post-digestion with hyaluronidase. This confirmed that the areas of positive staining material were in fact HA. Sections from non-densified tissue demonstrated minimal HA content when compared to the palpated densifications. HA can be demonstrated by both Colloidal Iron and Alcian Blue stains, and also confirmed by lack of staining after treatment with hyaluronidase. This visual method indicated high concentration of HA at the CC that decreased away from the site.

Keywords: Fascia; fascia lata; hyaluronic acid; histological techniques



T1rho MRI for treatment evaluation: clinical implication

Antonio Stecco

Diagnosis and management of musculoskeletal pain is a major clinical challenge. The Pain in Europe Survey showed that 71% of the chronic pain cases were related to musculoskeletal pain. Although 77% of the pain patients are happy with the last consultation, still, 95% of the patients continue to suffer from pain. Hence, we need to strengthen our understanding of the symptoms and the related mechanisms underlying musculoskeletal pain. Even if most clinicians consider chronic pain to be typically due to ongoing peripheral nociceptive input, there is not a single chronic pain state where any radiographic, surgical, or pathological description of peripheral nociceptive damage has been reproducibly shown to be related to the presence or severity of pain. Six patients were recruited presenting chronic elbow pain (> 3 months), with an age between 18 and 65 years old. Patients underwent two MRI T1rho evaluations and DASH questionnaire was administered to quantify the symptoms and the pain intensity. A major red region was identified at the level of the deep fascia (forearm fascia) in the pathological site. Some red spots were also present in the middle of the forearm coronal section, corresponding to intermuscular septa and vessels. Statistical significant differences in concentration of GAG was also found between symptomatic and asymptomatic forearm sides. This manuscript suggests that we might finally have made some science-based progress with respect to etiology in the pain field to begin to implement our clinical practice.



Fascial Manipulation versus conventional TMJ treatment: RCT in algometer and EMG

Florence Sekito, Orthodontist, Universidade Federal de Rio de Janeiro

Temporomandibular disorders (TMD) are the most prevalent cause of facial pain without a clear etiopathogenesis and gold standard treatment. This study was designed to understand the possible role of fascia tissue in this syndrome. For this study were used the following outcomes: verbal rating scale (VRS), Research Diagnostic Criteria for Temporomandibular Disorders (RDC), Electromyography (EMG) on Masseter and Temporalis Muscle. Evaluations were performed prior the therapy, end of the treatment, one month and six months follow up. 32 patients, with clinical RDC diagnosis, were recruited and divided in two groups. Group 1 underwent five sessions of treatments of Fascial Manipulation Stecco's method (FM) weekly, while group 2 received Michigan occlusal appliance, dry needling over masticatory muscles and anesthetic injection over muscle trigger points. Both groups shown a similar initial VRS score that improve after the treatment and maintained at 30 days and 6 months' follow-up. The FM treatment was shown to be able to reduce pain in only 5 sessions resulting a valid, cost-effective and non-invasive treatment. Both the groups had a limited comfortable opening of the mandible at T0, which shown statistically significant improvement at T1 that decreased at 30 days and 6 months.

FM could be used as an effective odontological tool for a rapid, safe and cost effective approach to reduce pain and gain function not only in TMD myogenic disorder, but also in arthrogenic disorder.



“Evaluation of influence of the Fascial Manipulation Method (therapy of the receptor sequence) on acquired Myopia at teenage children”.

Michał Sternak, Jarosław Ciechomski & Karol Waligóra

Abstract:

Dysfunctions associated with the head's region are rarely the object of interest from physiotherapists. Also in the minds of physicians that treat these problems, diseases of the eye, ear or abnormal taste or smell, are not analyzed as myofascial disorders. And those diseases, even while closely connected to each other, are treated separately by different specialists. Myopia is the most common sight defect and affects almost half of the population in the world. Generally, it starts in childhood, during developmental period (puberty) and it steadily increase to about 21 years of age, until the growth of the eyeball is finished. Ophthalmic data show that myopia gets worse in all children, even though they wear properly selected glasses. In addition, ophthalmology does not propose other forms of treatment of this dysfunction except simple exercises of the eyeball. Children's Myopia is a disease of photoreceptor apparatus, which is ideally suited for this kind of research, because most patients do not have other concomitant diseases, which could adversely affect the progress of therapy. That's why it was decided to run the research to check does FM therapy affect the progression of this defect and if so than to what extent. Children that was taken into research process was in age between 10 and 18. Acquired Myopia was confirmed in all cases by oculist inspection and each child was referred for FM therapy. The number of children that was inspected was 25. Full research process was comprised of three therapeutic cycles (3 sessions every 6 month) and oculist check-ups for the long-term influence of therapy which were conducted on average for 24 months, counting from the beginning of the study. The size of sight defect (measured in diopters) and the result of functional test using Snellen's wall chart were taken into account. Variability of the defect progression was compared with the control group that contained 24 participants. The pilot studies have demonstrated the effectiveness of therapy which integrate the work of sensory organs as a one system. Fascial Manipulation influenced the slower progress of acquired myopia in children in the research group by 55.7% on the left eye and 61.3% on the right eye, respectively, compared to the control group and improvement of visual quality, as confirmed by tests on the Snellen's wall chart. The study also indicated which catenary could be more involved in myopia and link the more dysfunctional eye with the dominance of the densified points on the same side of the body.

Results of the therapy may indicate that the Fascial Manipulation Method affects the regulation of tension in the receptor sequence, so the eyeball ceases to be the "victim" of uneven pulling caused by the fascial system. It seems that this type of therapy, extended to the entire receptor system and directed to sense organs considered as one system, is able to significantly slow down the progress of eye defects, just like acquired myopia in children.



Experiences of Fascial Manipulation Stecco in neurological physiotherapy for children and adults

Nita Tolvanen, april 2019

Abstract

The use of Fascial Manipulation (FM) for patients with neurological disorders has not been a topic for research yet. There have been some ambivalence regarding how to apply FM to neurological patients, indications and benefits. In Finland there are separately working therapists with quite a lot of clinical experience regarding the use of FM for patients with neurological disorders of different ages. No one has before tried to collect these very important clinical experiences. Therefore for example teachers of FM have found it difficult to explain how to adapt this method in neurology. This qualitative study based on group interviews was made to collect and identify data that answers these questions and to get an answer if FM can be used for neurological patients. In Finland there have been 4 FM courses (2 x level 1, 2x level 2) where the participants have been therapists working with neurological children. Teaching was made by our teacher Tiina Lahtinen-Suopanki assisted by Nita Tolvanen with experience of using FM with neurological patients. Of these participants who all had completed level 2 twelve (12) participated in the interviews. They had a work experience of 10-40 years. The fact that they have a long experience of working without FM makes the results even more important. Together they had experiences from 135 different cases with a age range from one month old babies to adults. Through their experiences it has become clear that it is possible to apply FM to neurological patients but it requires some adaptation of evaluation and of course some other method that promotes motor learning and functional skills. Evaluation and reasoning where to start palpating has been based on knowledge regarding the effects of movement patterns, importance of alignment and observation of compensations (on which plane or in which segment) that are similar in the NDT/Bobath approach (of these 12 therapists 10 were NDT/Bobath therapists which might be of importance). Evaluating have included analysis of changes in movement patterns, range of motion or quality of movement before and after treatment. These changes have been evaluated by observation, by taking photos or videos before and after. Often therapists have evaluated a certain movement/part of movement or the change in performance and when possible patients own experiences. Patients tell moving gets "easier"(requiring less effort and concentration), they can "feel their muscles" better. All therapists have taken a more indirect approach the first time they treated, but in the future they all have used a more direct approach because all patients have some kind of problems with central output and/or muscle tone and incorrect movement patterns which as repetitive movement patterns cause densifications over and over again in quite the same manner. Neurological patients have clearly benefited from this method when it is combined with other approaches that promote active motor skills. All participants have had the experience that it is possible to affect proprioception by using FM, for example decreasing sensitivity to touch, increasing awareness of unused muscles, increasing peripheral awareness that makes it easier to



find difficult movements or to move on uneven surfaces. Balance and body awareness has improved. Some of these effects have been seen immediately, some have come during time and repeated treatment. Treatment of scars, both very old and new, has made it easier to recruit muscles and it has increased sensory feedback. For increasing range of motion (ROM) FM has been very effective and most therapists have started to use FM first and then stretch if needed and usually only end range of motion. It has been possible in some cases to decrease contractures by FM, which have not released by passive stretch. These experiences have regarded; CP, MMC, Erb's palsy. Selective movements have been easier to learn when agonist-antagonist coordination has become easier. Clonus and spasms have decreased or disappeared, even though these are generally thought to be of central origin. The impact of incorrect movement patterns has become less severe. This has to do with the cumulative effects of FM.

The ability to produce selective movements in tongue and jaw have made closing of lips, sucking and feeding easier. Also phonation/ speech has become better and drooling lessened. More effective breathing has had a big effect on so many things from feeding, to speech and moving. Fascial manipulation has been used as the only method only when treating pain. As a way of understanding and treating pain in individuals with hypertonia it has been a new and very powerful method. Some young adults tell that FM affects pain more effectively than medicine. FM has become an important method providing new understanding how everything is connected and explaining the importance of fascial tissue adaptation for movement and proprioception and when manually produced gliding is needed to get adaptation to movement and better results than before. FM has been used repetitively since spasticity continuously affects ECM and incorrect movement patterns causes densification as repetitive movements with small variations. How often FM has to be used seems to correlate with the degree of muscle tone and the ability to produce active, selective movements. The more/better the person could adapt to change in gliding the longer the pauses can be held between treatments. This is a field of application of Fascial Manipulation that needs further clinical experiences, case-studies and research for the benefit of neurological patients of all ages who definitely benefit from this method when applied according to their needs. According to these experiences is likely that also patients with MS, stroke and Familiar ALS (FALS) could benefit from FM, since there are good clinical experiences also among these patients. This requires further case-studies and research.



NUOVE POSSIBILITA' TERAPEUTICHE DELLE DISFUNZIONI ATM ATTRAVERSO L'INTEGRAZIONE DELLA MANIPOLAZIONE FASCIALE.

Elena Lucani

Premessa:

Le disfunzioni dell'articolazione temporo-mandibolare sono un capitolo della patologia vasto che può incidere molto negativamente sulla qualità della vita del soggetto interessato.

La comprensione esatta di tutti i fattori di rischio e di tutte le determinanti della patologia è fondamentale per il successo della terapia, una mancata diagnosi si traduce inevitabilmente in un fallimento terapeutico che conduce all'insuccesso del medico e all'aggravarsi delle condizioni di vita del paziente. La soluzione completa di alcune patologie articolari resta comunque chirurgica, ma va percorsa questa strada soltanto come extrema ratio, ricordando che il paziente giunge alla nostra osservazione spesse volte per il dolore. Perciò un'accurata diagnosi, la comprensione globale dello stato di salute del paziente, le sue richieste, le aspettative e l'età del paziente, devono guidare un team di clinici e di medici verso la migliore terapia possibile senza trascurare ogni aspetto delle scelte fatte. Alla luce di quanto sinora esposto, la MANIPOLAZIONE FASCIALE si integra come arma spesso vincente nella gestione del dolore e ripristino della funzione nonostante il quadro diagnostico deponga per interventi chirurgici che possono essere ritardati se non evitati negli anni grazie al supporto di questa innovativa tecnica.

Obiettivi dello studio:

Questo case report si pone come obiettivo quello di mostrare come un caso clinico, estremamente complesso per la presenza di molti fattori di rischio, sia stato valutato in tutti i suoi aspetti e risolto con successo grazie ad un lavoro di squadra dove non è possibile prescindere dalla collaborazione tra professionisti in quanto soltanto una visione globale dei meccanismi che sottendono la fisiologia e la funzione può guidare la terapia. La mancata valutazione del peso di ogni singolo fattore può portare a scenari complessi ed invasivi per il paziente perciò l'utilizzo della MANIPOLAZIONE FASCIALE si è dimostrato vincente nel controllo del dolore e nel ripristino di una funzione, nel caso specifico quella masticatoria.

Materiali e metodi:

È stato preso in esame un giovane uomo di 25 anni, il problema da lui lamentato era dolore e rumore presente in zona peri auricolare sinistra durante la fonazione e la masticazione. È stato somministrato un questionario dove si utilizza una scala NRS e una scala VAS per la valutazione del dolore soggettivo, il



questionario fornisce elementi essenziali per l'interpretazione globale del paziente, comprende l'anamnesi patologica remota, l'anamnesi patologica prossima, indaga il comparto oculare, quello vestibolare, quello dentale, le abitudini durante la vita quotidiana, la funzione del sonno, eventuali terapie farmacologiche e lascia spazio per la libera espressione di ciò che il paziente ritiene importante da comunicare. La documentazione medica del paziente è stata completata con due esami radiografici, radiografia ortopantomica e radiografia cranica con proiezione latero-laterale ed una risonanza magnetica a bocca aperta e a bocca chiusa. In base alle risposte fornite con il questionario, la storia anamnestica e le indagini strumentali è stato ritenuto fondamentale l'utilizzo della MANIPOLAZIONE FASCIALE.

Risultati:

Dopo due sedute di MANIPOLAZIONE FASCIALE eseguite a distanza di 30 giorni l'una dall'altra, è stato somministrato di nuovo il questionario. Il paziente riferisce la completa scomparsa di rumori, la completa scomparsa del dolore e una normale ripresa della funzione masticatoria. Questo risultato dovrebbe esaltare l'importanza della funzione sulla forma, essendo questo caso risolvibile nella forma soltanto chirurgicamente. È essenziale non dimenticare che il paziente è un paziente giovane, motivato, che ha compreso il suo problema, chi si è recato presso specialisti con la richiesta esplicita di eliminare il dolore e riprendere una normale funzione masticatoria. L'obiettivo è stato raggiunto con tecnica non invasiva, ripetibile, priva di effetti collaterali. La corretta diagnosi e l'accuratezza nella raccolta dati consentono di assistere il paziente qualora si dovessero manifestare dei peggioramenti della sua situazione clinica. Attualmente il paziente è stato inserito in protocollo ben delineato di controlli e di richiami fisioterapici volti a mantenere il risultato ottenuto. Il caso, nella sua gestione apparentemente semplice, deve essere di esempio su quanto le componenti fasciali incidano nelle manifestazioni dolorose lamentate dei pazienti.



Case report: The effect of Fascial Manipulation in addressing severe knee tightness

Magesh Anand Doraisamy

A 68-year-old gentleman was referred to the writer with complaints of decreased ROM in the Left Knee and associated lack of Function following Left Total Knee Replacement (TKR).

The patient had Left TKR on Oct 10, 2017 and subsequently seen by the referring Physiotherapist on Oct 17, 2017. At this time, he had ++ swelling in the Left knee typical post-TKR. The patient was to follow NWB crutch walking. He had pain in the Left knee - Numeric Pain Rating Scale (NPRS) - 7/10. This individual underwent 12 Physiotherapy sessions with the referring PT using conventional PT management as per total knee replacement protocol.

The patient's range of motion improved from knee flexion of 37 degrees (active) and 50 degrees (passive) to knee flexion of 87 degrees (active) and 92 degrees (passive). He plateaued in his progress and the surgeon did not want to consider manipulation under anesthesia. Hence he underwent another 12 sessions of PT with no further improvement. The PT referred him client to the writer for considering fascial manipulation approach.

Writer focussed on the knee retinacula (CF's of the knee joint) and its synergists into hip (CX) and leg (TA). The knee ROM and LEFS (Lower extremity function scale) at the initial assessment with writer were – 88 degrees (flexion), full knee extension and LEFS – 54/80. After 7 sessions of FM primarily involving the anterior center of fusions of the knee and its synergists in the Hip and Leg his ROM improved to 109 degrees (flexion), full knee extension. At one month follow up his Knee flexion - 107 degrees (flexion), full knee extension and LEFS – 64/80.

Discussion:

The most sought-after physiotherapy methods of approach in cases of joint stiffness is arthrogenic mobilization (glide, slide, and roll) of the joint itself and the tightness of the soft tissues are addressed primarily with passive stretching. In advanced cases manipulation under anesthesia or surgical interventions are considered Fascial Manipulation (FM) offers a viable treatment alternative in terms of manipulation of the associated soft tissues and myofascia and in this case the person had a clinically significant outcome.

Written Informed consent was obtained from the patient prior to writing this case report. The patient is aware that the writer will be publishing this case report in a forum that would be accessible to other health professionals and the general public.



Effects of a subtle touch technique and their repercussions on the fascial system

Tatiane Heredia Chitão

Fascial studies have broadened the scientific knowledge on human anatomy and physiology, completely altering the traditional paradigm used to establish several diagnostics, interventions and treatments presently. Taking it into account, and according to current scientific research, one knows that the superficial fascia communicates with the skin, having a very important role on skin mobility in regards to deep fascia, on protection of superficial vases and nerves, on lymphatic draining and on the separation of stereoeception from proprioception; deep fascia, on its turn, communicates with the muscular-skeletal tissue, is composed of several layers of connective fiber overlaid in diverse directions and its adaptability is due to the sliding of one layer through the other, having an important role in deep and superficial fascia sliding. Thus, we sought to observe the influence of stimulation in the wrist retinaculum on skin texture or viscosity on arms and legs, gain in movement range on shoulders and decrease in pain EVA on shoulders and elbows. Within this context, this preliminary study has an exploratory nature, based on the direct observation of patients who experimented the due technique. It was observed that the response to moving the hand in rotation around the wrist, in the retinaculum region, back and forth, with medium pressure, had proficuous results. The study comprised ten subjects who volunteered into participating in the experience, supposing that the stimulation applied to this region could trigger physiological responses in several systems, being that fascia intersperses all of them. The subjects who participated in the experience presented complaints of pain, pathologies and diverse disfunctions on shoulders and elbows. They accepted to participate in the experiment through the application of the technique, which consists of holding one's own wrist with the opposite hand closed, keeping light pressure, and twisting it back and forth five times, releasing the wrist after the fifth time. The technique also encompassed the repetition of the gesture on the opposite arm and it was performed twice a day, once in the morning and once in the evening, every day, during three weeks. The effect was evaluated based on the EVA scale of pain, measured once a week. The results of the activity can be verified through images that expose the differences after seven days of practice: the pictures show the subjects performing maximal non-painful



shoulder extension in front, back and both sides view; their self-accounts are of improvement. Pain EVA was significantly reduced in 100% of the subjects, being that 70% of whom reached zero on the scale, and 30% reached between 2 and 4 only in specific movement of extreme range, performed sporadically in their daily routines. 60% gained back complete shoulder extension range without any pain, 20% gained back partially complete range, reaching the scapular plane without pain and 10% improved the range they presented at the beginning of the study. The accounts report improvement on trunk and upper limbs general mobility, on sleep quality, on general blood circulation and on skin viscosity on arms and legs for all the subjects of the study. The preliminary results of this study evidence, already in the first week, great improvement on pain EVA for elbows and shoulders, gain in range on shoulder extension, increase in the availability of movement in all aspects of the joint complex evaluated, as well as improvement on skin texture, on quality of sleep and blood circulation with the application of this intervention. It might be suggested that the technique applied triggers responses on superficial and deep fascia. Some understandings over the relation between superficial and deep fascia on the region where the technique was applied still suggest studies.



A Schematic assessment model for palpation verification in Fascial Manipulation - Stecco method

Joshua Samuel Rajkumar

Introduction: Fascial Manipulation (FM) – Stecco Method is a manual therapy method developed by Luigi Stecco based on the fascial anatomy, physiology and biomechanics. The Stecco Method of FM has considerable focus on the deep fascia which is responsible for transmission of forces required for movement efficiency. The other key component of the fascia's biomechanical model proposed in the Stecco Method is the Centre of Coordination (CC) where the forces generated by the intra and extrafusal muscle fibres converge or the Centre of Fusion (CF) where there is fusion of 2 CCs, which are present in each body segment working for producing coordinated movements in a particular plane forming a specific sequence of motion running along the segments of the body as a continuum. This led to the transformation of the traditional thought of motor unit to myofascial unit (MFU), which is the coordinated activation of the neuro-musculo-fascial-skeletal components in performing a meaningful movement as a unit. The possible movement availabilities are Antemotion (AN), Retromotion (RE), Intramotion (IR), Extramotion (ER), Lateromotion (LA) & Mediomotion (ME) in the case of CCs as 6 sequences working synergistically or antagonistically and the intermediate CFs as a combination of 2 planes of movement as AN-ME; AN-LA; RE-ME & RE-LA forming 4 additional sequences as a diagonal or spiral organizations. The deep fascial layers in particular if its gets densified (aggregation of Hyaluronic acid) due to trauma or surgery or repetitive strain or other injuries, leads to faulty coordination of that specific MFU, which there by causes poor force transmission leading to restriction of joint range of motion, pain and weakness in the long run. The treatment involves analysis of the CCs and CFs using a standard FM assessment chart with a detailed history taking to determine the time-line of events leading to the present problem, movement verification and palpation verification which will give us an idea on the sequences affected and the points to be treated. There is increasing availability of evidence for the effectiveness of this FM Stecco Method in musculoskeletal and neurological conditions. However, the assessment chart used to analyse the patients, especially the Palpation Verification has been reported to be a difficult and time taking process by the FM practising therapists. Hence



the objectives of this research project was to develop and propose a schematic assessment model for Palpation Verification in Fascial Manipulation – Stecco Method on its ease of use, time consumption and treatment outcomes.

Material and Methods: The Palpation Verification (PaVe) section alone of the FM assessment chart was further modified to have a therapist-friendly approach for evaluating, assessing and find the balancing sequence. The modification was carried out by an Assistant Trainer of the FM Stecco Method without changing its originality, however to develop a new schematic model for ease of evaluation. The modified PaVe section is described as follows. The modified PaVe chart (see Appendix) has a total of 4 sections and its contents are as follows:

Section A: Time-Line Hypothesis ;

Section B: Palpation Verification of Body Segments ;

Section C: Balancing Table ;

Section D: Inference .

Results: The outcomes were measured after the end of 4-weeks with the 6 therapists completing at least a minimum of 10 patients. The outcomes obtained in the parameters of Ease of Use ($t=8.66$; $P<0.01$) was found statistically significant in Group B compared to Group A. The average time taken to complete the PaVe in Group B was reported to be 10 minutes (10.66) compared to 16 minutes in Group A. The number of follow-ups visits in Group A was reported to be 3 in Group B compared to 7 in Group A with 2 drop-outs of patients in each groups. However, the additional measure Visual Analog Scale (VAS) for pain measured pre and post treatments in both the groups were equally improved and significant compared to pre-treatment.

Conclusions: The positive outcomes on the ease of use, less time consumption and better FM treatment outcomes would help us in considering the inclusion and further use of this schematic PaVe model in the FM assessment chart. This inclusion would also help in gathering relevant data for predicting specific time-line events that can cause specific compensations in the myofascial sequences leading to musculoskeletal dysfunctions. The secondary outcomes were a useful addition to the existing body of evidence related to Fascial Manipulation influence in reducing pain among regional musculoskeletal disorders. Further research on a larger population are planned to be undertaken once this schematic model has been accepted.



Animal fascial manipulation as a treatment tool for a one foal's congenital proprioceptive disorder in the right foreleg

Tuulia Luomala

This study is a case report about the foal, which had congenital disorder in the right foreleg. Her right foreleg was lacking the proprioception and muscle activity, when she was born. Problem was very visible, because the position of the right foreleg was abnormal. Knee was swollen and in flexion, pastern and the hoof were laterally rotated and overextended. Proprioception of the right foreleg was poor and the foal was unable to do proper weight bearing with the leg. Muscle activity of the right foreleg was also reduced and the foal was stepping over the pastern while moving. Aim of this study was to create rehabilitation plan to restore the functionality of the foreleg and help the foal to survive to the normal activities. Objectives of this study was to test if animal fascial manipulation will help to balance the foreleg according to the proprioception, posture, weight bearing and muscle activation. This type of treatment is special, because often foals are not treated with manual therapy if they have this kind of congenital proprioceptive disorder. From the veterinary aspect this was hopeless case and they recommended to do euthanasia. This foal is valuable, so the owner wanted to try conservative rehabilitation perspective. This study was made with the co-operation of the local veterinarian; she was checking the condition of the foal during the rehabilitation process. Aim of this case study is to highlight the importance of early treatment in this kind of cases. This case study also highlights the ability of the body to recover and myofascial system to heal with proper treatment plan.

Foal was born 6.6.2018. Owner noticed just after the birth that the foal is unable to stand and do weight bearing with the right foreleg. Foreleg was giving away from the pastern and it was turning around into the wrong direction. Veterinarian checked foal and there was no findings with X-rays or ultrasound. There was no hope for this foal to survive from the veterinary perspective. Owner was contacting Tuulia Luomala as a consultation. Owner offered the foal as a case study material to do the research if conservative rehabilitation would save her life. Owner and Tuulia Luomala decided to created rehabilitation program. In this rehabilitation program animal fascial manipulation was the treatment method. Also restricted movement, supportive aids and help of the farrier were included to the rehabilitation program. Animal fascial manipulation was done 5 times. During the first month owner used supportive aid to avoid skin wounds in the pastern. During the second month we increased movement outside and supported movement with treatment. At the same time farrier was helping the hoof with special shoeing.

First animal fascial manipulation session was done 21st of June 2018, when the foal was about 2 weeks old. Second session was done 25th of June, third 28th of June, forth 9th July and the last one 15th of July. Animal fascial manipulation was performed were gently in the first session. The foal



was very interested and active while treatment and outcomes were very fast. After the last treatment session foal was good enough to return to the normal life with her mother. End of the summer 2018 she was able to be part of the small herd in the field with her mother. Owner was giving the report via telephone every month up until April 2019 about the foal's progression.

First animal fascial manipulation session covered ANLA- and REME- diagonals. Second session included AN-RE sequences, third session was done to the ER-IR sequences, fourth session included AN-RE sequences and the last one ANLA- and REME diagonals. Treatment was focused to the right foreleg, scapula, thorax, lumbar and pelvic segments. First treatment session was very gentle, but the foal immediately got better activity to the muscles while standing. After second and third session edema of the knee was still visible, but the foal was using the right foreleg without overknuckling. Supportive aid was very helpful at this point to help the proprioceptive feedback from the foreleg. Fourth and fifth sessions were done with more precise manner and the foal was very active during the animal fascial manipulation treatment. After these treatments she got the permission to move without restrictions.

After 5 times of animal fascial manipulation the foal was able to stand and move without the leg giving away. Posture of the whole foreleg was better. Proprioception of the right foreleg was regained. Edema of the knee was almost disappeared. At this point farrier helped the hoof with special shoeing to maintain the balance of the extremities. Condition of the foal has been controlled via telephone until April 2019 and the situation has been stable. The foal is living the normal horse life in a small herd with other same year old foals. She is active and playing like a normal foal. Remaining problem is slight outer rotation of the whole right foreleg. This is not bothering her movements at all.

This case study highlights the importance of early treatment in this kind of congenital proprioceptive disorder case. In future we need more studies with same kind of cases to see how the rehabilitation process works generally. This one case anyway gives us hope to try manual therapy approached although medical treatments are not able to fix the disorder. With this case better alignment, improvement of proprioception and force transmission gives us guidelines that animal fascial manipulation can be a powerful treatment tool combined with other modalities, which are individually assessed. Also this case study shows that foals are very responsive to this kind of treatment. Animal fascial manipulation is quick treatment to perform, so active and movable foal can tolerate it well. Five treatment sessions is a short period of time well founded in this case. Early onset seemed to be the best way to help the body to recover from this kind of proprioceptive disorder.



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