Introduction: The development mechanism of pain after orthodontic treatment is still unclear, and there are no adequately established methods for its management. We report a patient with chronic numbness after orthodontic treatment who responded to ultrasound (US)-guided fascia release dry needling (DN).
Methods: The patient was a 42-year-old male with nothing of note in his past history. His chief complaint was "mandibular numbness" developing immediately after orthodontic surgery using vertical ramus osteotomy performed about 6 years earlier. The numbness extended to the entire face for the 6-year period. MRI of the head and blood analysis in the general hospital showed no abnormalities. There was no interference in activity of daily living. He was aware that his personality had become introverted since the surgery but did not fulfill the criteria for depression. His symptoms did not improve after oral or local treatment by dentists and physicians.
Results: When he visited our acupuncture clinic, limitation of mouth opening (dental arch width, 3 cm) and aggravation of pain during mouth opening were observed, although there were no neurological abnormalities. At the bone margin 1 cm anterior to the mandibular angle, there was remarkable tenderness (Visual Analog scale, VAS 80/100) and a stripe-shaped high echoic lesion of the fascia on US images (Fig. 1a). At this site, US-guided fascia release DN was performed once time. Immediately after the treatment, the local tenderness disappeared (VAS 0/100) and the intensity of the high echoic lesion decreased (Fig. 1b), resulting in improvement of mouth opening (dental arch width, 5 cm). In addition, his facial expression was improved.
Conclusion: The main cause of the pain in this patient was considered to be abnormal fascia in the surgical wound 1 cm anterior to the mandibular angle after vertical ramus osteotomy. On US images, abnormalities of the fascia were reported to be visualized as stripe-shaped high echoic lesions on the fascia in Japan (Kimura et al 2017). Palpation and US evaluation may facilitate the identification of abnormal fascia and effective local treatment.

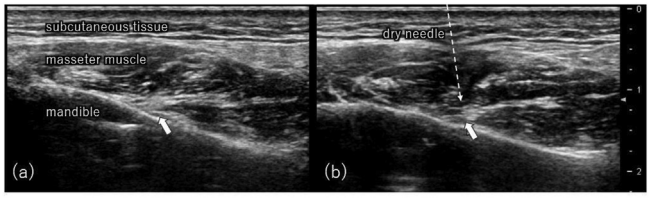

Figure 1
(a) Before dry needling treatment
(b) After dry needling treatment
White arrows(⇖) mean abnormal fascia, as stripe-shaped high echoic lesion of the fascia

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BIDIRECTIONAL SKIN TENSION CREATES SUBCUTANEOUS FASCIA MOVEMENT

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Introduction: Can manual bidirectional tension to the skin create subcutaneous movement? The skin and fascia exhibit tensegrity (intrinsic tension). Gracovetsky has considered the issues relating to the transfer of forces from the skin surface to deeper tissues, and suggests "While it is not known how much energy can be transferred from the skin surface to the deeper layers, it can be speculated that at least some of the therapist's energy, applied to the skin, will end up being transferred". Gracovetsky points to video illustrations of Jean Claude Guimberteau that demonstrate how a force applied to the surface of the skin ends up being dissipated deep into the tissues via a densely interconnected network of collagenous tissues (Gracovetsky 2016). Viscoelastic responses to mechanical forces are determined by their connective tissue (CT) extracellular matrix (ECM) composition and architecture. Mechanical tension can induce changes in the ECM subsequently modulating biological functions (Guimberteau 2012). CT fibroblasts play a pivotal role in both immediate and long-term CT responses to mechanical forces. Ultrasound elasticity imaging is emerging as a powerful non-invasive technique to quantify biomechanical tissue behavior (Wong et al 2011).
Methods: Using ultrafast high frequency elastography we video imaged a relaxed (non-contracting) prone positioned hamstring with the knee fully extended. We lightly gripped the skin with latex finger cots to avoid downward compression and applying a bidirectional slow cyclical rotational torqueing of the skin. The ultrasound transducer head was placed between the bidirectional forces.
Results: Imaging captured significant subcutaneous and deeper fascial sliding and movement. This quantifiable movement was observed at depths greater than 3 cm.
Conclusion: Skin is directly connected to the underlying subcutaneous and superficial fascia through the reticular cutis fibers. Bidirectional mechanically manipulated skin facilitated sliding and movement. The effect of mechanical forces on connective tissue fibroblasts may be key to the therapeutic mechanism of manual therapies by causing important cellular effects both immediate (activation of signaling mechanisms) and delayed.

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Phenomenological and Philosophical Aspects
STUDY OF THE IDENTITY CHANGES OF A GROUP OF PHYSIOTHERAPISTS WHO PRACTISE DBM FASCIATHERAPY

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Introduction: Regarding the opportunity for physiotherapists to integrate knowledge about fascia within their clinical practice and to develop a new perspective about somatic disorders (Kwong & Findley 2014), we hypothesize that physiotherapists practising DBM Fasciatherapy may have made professional adjustments, and in particular identity shifts (Courrad 2012; Courrad et al 2018). This research investigates the existence of identity changes amongst French physiotherapists who practise Fasciatherapy. A quantitative survey was conducted amongst a population of practitioners, with a view to: (1) Identify the impacts of the changes resulting from Fasciatherapy practice; (2) Exploring and characterizing the existence of various identity profiles.
Methods: We used a self-administered customized questionnaire investigating 5 dimensions: professional characteristics, professional identity features, DBM Fasciatherapy practice modalities, changes in professional practice, and impacts on professional and private life. The questionnaire was forwarded through the internet to a population of 446 physiotherapists trained in Fasciatherapy. We carried out a multivariate analysis to study how such changes could be associated with varying identity profiles.
Results: 238 questionnaires were completed (53% of the population surveyed). General characteristics of the data and the population: (1) They are mostly women (65%), between 30 and 44 years old (44%), preferably using manual therapy techniques (70.2% having a speciality in that field); (2) 45% have started their own practice after the training, 75.6% see their patient base changing, 54.6% have broadened their patient intake (with more chronic conditions. An AFC (Fig. 1) followed by the k-means method on 7 identity variables (within parameters of perceived identity, presented

identity, projected identity, and displayed identity) revealed 3 identity profiles (A: Physiotherapist profile 17.6%, B: Physio-fasciatherapist profile 55.5%, C: Fasciatherapist profile 26.9%) that appeared significant, characterized and opposed to one another (change to patient base, use of Fasciatherapy modality, Fasciatherapy session, Professional and Personal impact). (Table 1)

Conclusion: Practising Fasciatherapy has an impact on professional practice and identity traits. A significant proportion of practitioners combine the identities of physiotherapist and fasciatherapist, and few of them remain physiotherapists. These profiles are defined with regards to the statutory, professional and practical characteristics of Fasciatherapy.

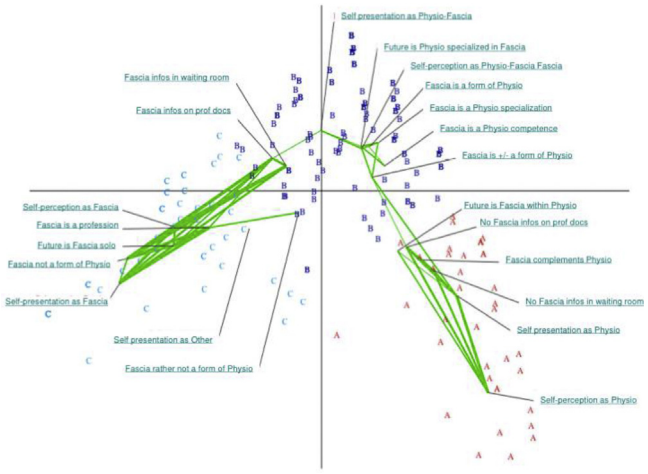

Fig. 1. Results of a Correspondence Factor Analysis (CFA).

Characteristic	Physiotherapist (Type A : n =42, 17,6%)	Physio-fasciatherapist (Type B : n=132, 55,5%)	Fasciatherapist (Type C : n=64, 26,9 %)
Change to patient base	No change	Increased patient base Patients' fasciatherapy demand (25 to 50%)	Decreased patient base Patients' fasciatherapy demand = 100% of consultations
Use of Fasciatherapy modality	Smaller part Within or in addition to physiotherapy techniques Used with other techniques	Larger part Replacing or within physiotherapy techniques Not used with other techniques	Solely Replacing physiotherapy or outside its scope No used with other techniques
Fasciatherapy session	<1 session/day 20 to 30 mn	5 to 10 sessions/day 30 to 45 mn	5 to more than10 sessions/day 45 to 60 mn
Professionnal impact	More pleasure To improve practice	To find a more personal style and to differenciate from other physiotherapist Renewed motivation Better financial outcome	Living a passion Vocation More pleasure More satisfaction and worth
Personal impact	More self-aware	Greater confidence More adaptable Needs-boundaries balance Finding solutions	Better self-esteem Fuller more joyful life Better physical and mental health

Table 1 : Characteristics of the 3 identity profiles

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VISCERAL MANIPULATION TO TREAT FUNCTIONAL CONSTIPATION IN STROKE SURVIVORS: A RANDOMIZED, CONTROLLED, DOUBLE-BLIND, CLINICAL TRIAL

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Introduction: Chronic functional constipation is common among stroke survivors. Visceral manipulation can be used as a form of treatment, as it acts on the structures surrounding the bowels that may have lost their normal capacity of resilience. The aim of the present study was to evaluate the effect of visceral manipulation on symptoms of functional constipation in stroke survivors.

Methods: Thirty stroke survivors met the eligibility criteria and were randomly allocated to an experimental group and control group. Both groups were submitted to conventional physical therapy to rehabilitate the functional sequelae caused by the stroke. The experimental group was also submitted to a visceral manipulation approach (sphincter inhibition and mobilization of the large intestine), whereas the control group was submitted to a sham procedure (superficial touching over the intestines). Evaluations were conducted prior to the intervention, immediately after the first intervention session, and one week after the end of the five sessions. The intestinal symptoms rating scale was administered during the pre-intervention evaluation and one week after the end of the intervention.

Results: Significant results were found in frequency of bowel movements of the experimental group after intervention, especially with: reduction of the percentage of patients that had bowel movements once every 3 days (from 53% to 21.4%, p=0,02) and increase of the percentage of patients that had bowel movements once or twice a day (from 0% to 14.2%, p=0,04). Significant improvements were also found in intestinal symptoms of the experimental group (Table 1).

Conclusion: Visceral mobilization can be part of a neurologic rehabilitation program to improve symptoms of constipation in stroke survivors.

Table 1
Prevalence of intestinal symptoms in control and experimental groups before and after intervention.

	Control group			Experimental group		
	Pre-intervention	Post-intervention	p	Pre-intervention	Post-intervention	p
Abdominal pain/discomfort	53.3%	53.8%	0,75	66.6%	14.2%*	0,006
Soft or watery stools	13.3%	15.3%	0,9	6.6%	7.1%	0,93
Very hard stools or unable to eliminate stools	73.3%	69.2%	0,9	66.6%	28.5%*	0,009
Strain required to move bowels	53.3%	53.8%	0,9	66.6%	35.7%*	0,02
Sensation of urgent need to move bowels	6.6%	7.6%	0,85	0%	0%	
Abdominal swelling or distension	26.6%	30.7%	0,85	20%	14.2%	0,15
Difficulty passing gas or excessive passing of gas	40%	38.4%	0,9	53.3%	21.4%*	0,03
Sensation of incomplete bowel movement	53.3%	53.8%	0,9	66.6%	28.5%	0,009
Anal pain at time of moving bowels	33.3%	38.4%	0,8	46.6%	14.2%*	0,02

Legend: Pose-intervention: one week after last session; *statistical significance level assumed at $p<0.05$ (X^2 test)

Sensory Aspects

THE ROLE OF THE AUTONOMIC NERVOUS SYSTEM IN THE DEVELOPMENT OF EXERCISE INDUCED MUSCLE DAMAGE: RESULTS OF AN RCT

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