

A method for managing technical skills in the acquisition and perfecting of the osteopathic gesture.

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One of the main pitfalls of practical training in osteopathy lies in the notion of feeling which, in essence, is subjective and generates many biases¹². For a number of years, we at Ostéobio, have been considering the design of a method for teaching manual therapeutic acts (MTA) based solely on elements that can be objectified on and/or by the patients themselves. This method allows us to enhance the credibility and reliability of osteopathic gestures with regard to the domain of health and also, to strengthen the coherence and homogeneity of the training offered to our students.

In compliance with the pedagogical curriculum requirements laid down by the French Ministry of Health, the learning of osteopathic gestures must be completed by the end of the 3rd year. Thus, our method, which extends over 6 semesters of studies, is closely linked to a theoretical model of acts which is itself based on biomechanical, mechanobiological and neurophysiological foundations. Therefore, the Ostéobio method is articulated around 3 major points:

- it sets the objectives to be achieved according to the theoretical foundations of each step of the MTA concerned
- from these objectives, it determines observable criteria on the patient which favor the best conditions for the success of the procedure
- it defines execution factors and necessary resources available to the practitioner to meet the observable criteria

A theoretical model of Manual Therapeutic Acts.

At Ostéobio, each gesture is divided into 2 or 3 stages, depending on the type of act and, each stage corresponds to the practical translation of theoretical mechanisms that are now well documented in the literature.

These mechanisms, specific to each stage can be boiled down to the “stress/strain” relationship. In other words, since osteopathy is a manual medicine (it must therefore, naturally, lead to a contact between the osteopath's hand and the patient's skin), the practitioner initiates mechanical actions which, as a result, generate stresses on the tissues of the patient³⁴ and, according to the laws governing tissue behavior, these stresses produce deformation⁵⁶. Furthermore, scientific literature on the neurophysiological effects of manual acts is well documented and, reliably, demonstrates the beneficial and fairly rapid impact of numerous manipulations,

¹ C. BARRY and B. FALISSARD, 2012

² D. THIN, 2012

³ J. TRIANO, 1992

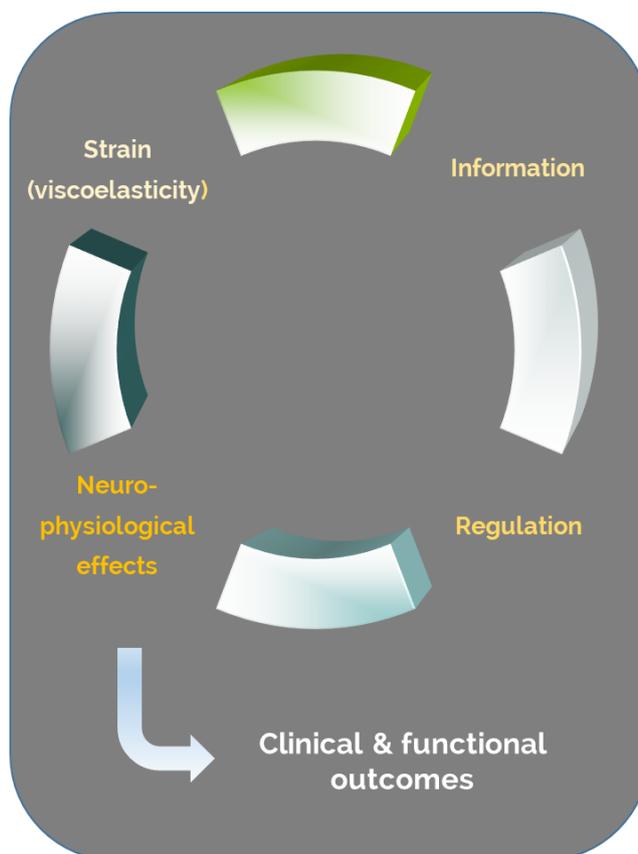
⁴ J.Y. MAIGNE, 2000

⁵ J.D. CASSIDY and al, 1993

⁶ W. HERZOG and al, 1993

mobilizations or maneuvers on pain⁷ and muscle stiffness⁸, and sometimes even on neuro-vascular symptoms^{9,10}. Finally, it is obvious that an osteopathic act, regardless of what it may be, must have observable clinical and functional outcomes, observable not only to the practitioner, but also, and above all, to the patient, and if possible, during the session of the act.

Thus, our theoretical model of acts can be summarized as follows:



Henceforward, in order to achieve a faithful practical translation of this vision of osteopathic gesture, we raised the following questions:

- i) is it possible, at each stage of the execution of a gesture, to free oneself from the feeling and to define observable criteria on the patient which, at the same time, meet the imperatives of the underlying mechanisms?
- ii) for each observable criterion, is it possible to describe execution (and therefore success) factors which will, more or less, almost certainly make it possible to achieve the targeted objective?

⁷ A.R. GROSS and al, 2004

⁸ M. SOLOMONOW and al, 1998

⁹ P. MOSS and al, 2007

¹⁰ L. KINGSTON and al, 2014

- iii) how can these execution factors, within the framework of a pedagogical relationship characterized by the transmission “from the hands of the instructor to the hands of the student” be made workable, in a coherent and standardized way for the whole class?

Difficulties encountered and the solutions envisaged.

The first pitfall we encountered was a classic (albeit expected) general reaction of defiance on the part of many instructors. Almost all of them had undergone training based on the empirical transmission of a more or less obvious feeling: a feeling of position, of stiffness, of consistency, of alteration, of asperities, of tissue reactions that are sometimes difficult to describe... Even though what was felt was not always identical for different practitioners, feeling was (and is still largely the case) deeply rooted as a principle, unanimously shared by the pedagogical community. In addition, this feeling was perceived as the key element in therapeutic decision-making. Furthermore, encouraging instructors to review the designation, the presentation and the description of acts from an objectifiable angle has, against all the odds, led some of them to revise the very notion of osteopathic diagnosis, at least in its wording.

Other more specific difficulties emerged when we sought to present this method to the different acts of the technical range of acts taught in our school. Three of them, in particular, have been the subject of in-depth reflections on the following issues:

- How to translate the mechanisms of the acts described in the literature into observable criteria on the patient and, for each stage of the execution of the gesture?
- How to establish a link between these observable criteria and the execution factors of the gesture? In other words, how can one be sure that the designated execution factors are reliable enough to achieve the observable criterion?
- How to obtain homogeneous outcome in a class made up of students whose aptitudes and learning profiles differ.

In order to address concerns raised in first question, we have written a description of all acts in 2 or 3 stages, depending on the type of act. Thus, each act begins with a positioning stage. Then, all acts, other than high-velocity manipulations generating cavitation noise, end with a push phase, whereas high-velocity acts are composed of an intermediate preload phase and a final impulse phase. These acts therefore include 3 stages, while all the others have only 2.

Then, for each act, in our technical range, we have adapted the presentation of the different stages to the mechanisms (principles of the stress/strain relationship) described in the literature. To this end, we were inspired by the descriptions of particularly technical sporting gestures, often written in such a way as to clearly

distinguish different gestural execution stages and to clearly identify the observable criteria demonstrating the mastery of the gesture¹¹.

In reaction to the second question, we have drawn a list, in accordance with a school's agreement, of practitioners recognized as experts in one or more acts, and asked them to read the description of each of the stages of the act they had predilection for. As a reminder, each stage, if it is properly carried out, translates into one or more observable criteria on the patient. We then led them to determine execution factors attributable to the success of the stage, therefore to the revelation of the observable criterion or criteria. In order to facilitate the task of each referent instructor, we have grouped the performance factors into 4 groups:

- patient and practitioner positioning
- supports
- the segmental or bodily equilibrium of the patient and the practitioner
- the mechanical actions exerted by the practitioner

Finally, in reaction to the third issue we have, in collaboration with these same referent instructors, drawn a list of physical resources, or even mental ones in some cases, deemed necessary for the achievement of the execution factors. Each pedagogical sheet designates exercises allowing to work on execution factors as well as on resources that have to be harnessed for a proper execution of each stage of the gesture. Several exercises may be proposed to perfect the same execution factor and thus, students have a choice to make according to their individual aptitudes.

Pedagogical engineering

The pedagogical sheets are standardized and each MTA sheet is laid out in 6 points, as follows:

1/ Designation of the act: the terminology of acts used at Ostéobio presents: - The Teaching Unit considered and the year of study in question

- The type of act (articular, musculo-aponeurotic, abdomino-pelvic or cranio-facial),
- The positioning of the patient,
- The anatomical region on which the act is executed designates,
- The deformation produced on the patient

2/ Targeted skills: mastery of the stages involved in carrying out the act

¹¹ F. BEGAUDEAU and X. DE LA PORTE, 2007

- Prerequisites: knowledge of the mechanisms of the acts translated by the observable criterion/criteria on the patient for each step

- Evaluation criterion/criteria: observation by the instructor of observable criterion/criteria (maximum 4) during the execution each stage

NB: depending on the act in question, the pedagogical sheet may focus on one or more skills elements

3/ Pedagogical objectives: target, abide by and accomplish execution factors

– these execution factors are laid down with the objective of achieving the observable criteria

- they are subject to training exercises detailed in point 5 (each exercise is tailored to work on one or more execution factors)

- physical and mental resources corresponding to the stage worked on and which must be harnessed by the learner are highlighted

Point 4/ The recap table

OSTEOBIO PRACTICAL METHOD		STAGES			
		POSITIONING PHASE	PRELOAD PHASE	IMPULSE PHASE	PUSH PHASE
LEARNING METHOD	MECANISMS OF THE ACTS				
	OBSERVABLE CRITERIA ON PATIENT				
EXECUTION FACTORS	PATIENT / PRACTITIONER POSITIONING				
	SUPPORTS				
	EQUILIBRIUM				
	MECHANICAL ACTIONS				
RESOURCES	PHYSICAL				
	MENTAL / COGNITIVE				
EXERCISES	INSTRUCTIONS				

Review table

Point 5/ Range of exercises: working on execution factor(s) by using appropriate resources:

- These exercises are numbered and marked with instructions

- They are considered successful when the observable criterion is attained

Point 6/ Illustration of the gesture: pictures and videos of ATMs:

- These contents are presented for each gesture, step by step

- They are accessible on the UP'OSTEO application, as a teaching tool during physical and remote classes.

Conclusion

Over the last ten years, the learning of osteopathic gestures at Ostéobio has been the subject of a small pedagogical and intellectual revolution.

The pedagogical revolution, achieved after a long collaborative work, was put in place little by little, adhering to a principle of objectification of execution conditions of an osteopathic act, in order to free ourselves from the feeling, considered too personal, since it is linked to convictions, emotions and individual history, and therefore highly subject to cognitive biases. On this point, we are extremely proud of what we have achieved because, not only has this method given credibility to our practice, vis-à-vis non-osteopathic health practitioners (as long as everyone observes the same thing and speaks of the same findings, the integration and inclusion are greatly facilitated), but it has also greatly contributed to a symmetrical homogeneity, both from the point of view of the instructor and that of the student. Indeed, through this method, the instructor is able (or required) to evaluate all students in the same way and, on the other hand, the student benefits from a consistent and exactly the same training methodology in all courses and with all the trainers.

The intellectual revolution took place in a much more individualistic or confidential and even impalpable way, but with hindsight, it has become real and constitutes a groundswell that should not be overlooked. More and more practitioners (and this is especially true among the younger ones, who were still students not long ago) consider that the true value of osteopathic diagnosis lies in its nosological and not etiological character. In other words, faced with a functional disorder, the most important part of the osteopathic diagnosis would consist in the adequacy of the reason for consultation with the technical range available to the practitioner, and not in the understanding of more or less obvious physio-pathological phenomena which would not be based on established facts. In other words, this practical teaching methodology (combined, it is true, with ethical and deontological teaching) has led many young practitioners to build up their osteopathic practice according to the rules of Evidence Based Practice, thus freeing themselves from certain purely theoretical, or even philosophical considerations.

We believe that this vision of osteopathic diagnosis will eventually present a number of interests for the integration of our profession into the world of health and the provision of care and, we are currently working on establishing a probabilistic approach (in the sense of reasoning), rather than deterministic, in the context of our clinical practice. This represents another small revolution that will have to be based on scientific and clinical data.

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