Postgraduate training
musculoskeletal physiotherapy
Ghent University
Belgium

A Didactical Approach for Musculoskeletal Physiotherapy:
The Planetary Model

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Clinical reasoning process

- How to learn our students
- The thinking and decision making process
- In a didactical and efficiency model
- By clinical case presentations
Properties for a clinical model

- Complete: contains all relevant patient characteristics for clinical reasoning in MT
- Conform ICF
- Focus on the core business of MT
- Up-to-date
- Independent of MT – concepts
- Captivating and simple visual presentation

International Classification of Functioning

The consequences of any health problem for individual functioning can be seen as three dimensional.

- Impairment
- Activity
- Participation
The Planetary Model

Expectations for the student:

What is the hypothesis

After anamnesis
Activity / Participation

Movement dysfunction

Tissue mechanisms

Structural Impairment

Red flags

Expectations for the student

To give an overview of all possible involved anatomical structures (differential diagnosis)

Arguments for the most probable involved structure(s)

Determine the clinical importance related to the dominant pain mechanism
“Red flags” and contra-indications for MT

Expectations for the student:

Collect all “red flag” information through anamnesis, medical imaging, medical examinations

Exclude contra-indications for MT after clinical examination especially in the absence of medical data

Tissue mechanisms

Expectations for the student:

Actuality?

Load bearing capacity?

Stage of tissue recovery?

Does the clinical presentation corresponds with the expected stage of tissue recovery?
**Movement dysfunction**

Myofascial

Expectations for the student:

- Determine muscle imbalance
- Active and latent triggerpoints
Activity/Participation

Red flags
Structural impairment
Tissue mechanisms
Movement dysfunction
Myofascial
Articular
Activity/Participation

Pathway for articular dysfunction

Appropriate
MT
Identifying dysfunction patterns
Mechanical diagnose
In case of an articular dysfunction
Expectations for the student

- Identifying dysfunction patterns
- Pain mechanism
- Mechanical diagnose

Mechanical diagnose
The student should recognize

- Fixated/stiff joint
- Compressed Joint
- Instable joint
Dysfunction patterns suitable for the application of HVT techniques

Pain mechanism: mechanical nociceptive pain (cfr. history)

<table>
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<tr>
<th>Technique choice:</th>
<th>Opening or Closing</th>
<th>Facet dysfunction combined with neural tissue</th>
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<tbody>
<tr>
<td>Traction Translatory Gapping techniques</td>
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Red flags:
- Structural impairment
- Tissue mechanisms
- Movement dysfunction
- Myofascial
- Articular
- Neurological

Activity /Participation
Neurological

Expectations for the student

- Interpretation of neurological provocation and function testing
- Mechanosensitivity and/or stenosis?
- Recognising dysfunction patterns: opening or closing dysfunction/sliding or tensioning dysfunction
- Nociceptive or neuropathic pain?
- Mechanically irritated, inflammatory, ischemic?
- Pain cause: treatable with MT?
Motor Control

Expectations for the student
Recognition of:

- Adaptive en maladaptive postures and movement patterns
- Give and restriction
- Control impairment
- Muscle impairment: local – global
- Syndromes: flexion – extension – multidirectional patterns
Pain mechanisms

Expectations for the student: argue

- Dominant pain mechanism: input/processing/output
- Input: nociceptive or neuropathic
- Inflammatory/mechanical/ischaemic
- Processing: relation to psychosocial component
- Output: motor system/autonomous NS/neuro-endocrine/immune system

Pain mechanisms

Red flags
- Structural impairment
- Tissue mechanisms
- Movement dysfunction
- Myofascial
- Motor Control
- Articular
- Neurogene
- Psychosocial factors

Activity/Participation
Psychosocial factors

Expectations for the student: determine relevant PS factors related to the condition

- Attitudes and beliefs
- Behaviour
- Compensations
- Identification
- Emotions
- Family
- Work

Expectations for the student

Hypothesis Anamnesis  Structural impairment  Confirming or enfeebling
Clinical Case Presentation:

- Analyse pain mechanisms after anamnesis
- Hypothesis about impairment in structure: differential diagnosis and possible contraindications
- Impairments in activity and participation
- Stipulate relevant psychosocial factors and coping strategy
- Impairment in structure, function
- Stipulate therapeutic goals taking all the impairments, the actuality and the psychosocial factors into account
- Choice of therapeutic tools and modalities

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Thanks for your attention