Osteopathic diagnostics and EBM

a clear challenge for the future
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Never start a presentation with a graph...
Correlation vs Causality

Divorce rate in Maine correlates with Per capita consumption of margarine

Correlation: 99.26% (r=0.992558)

Data sources: National Vital Statistics Reports and U.S. Department of Agriculture
Correlation is not Causality

- A lot of the tests in the manual medicine field are correlation based tests
- I see 'test A' is positive therefore 'pathology/dysfunction B' exists.
- Is that so?
- Eg.: FTS, weight transfer test, Downing tests
Correlation is not Causality

Let me clarify where we have a problem in our reasoning with an example: The laws of Fryette.

- Very often used in diagnosis of the spine
- There is amply evidence that these combined movements do not follow any laws. (*)
- But we accept them. Why?
  - I do the testing
  - It shows a certain restriction (eg.: ERSie)
  - I do the manipulation in the opposite direction
  - The mobility restores
  - So the test was right!
  - Or maybe not ....
- It sounds logic
- But this assumption is as invalid as the following claim:
  - Women are solely responsible for global warming!

*(Stoddard 1969, Mimura et al 1989), (Pearcy & Tibrewal 1984; Plamondon et al 1988; Panjabi et al 1989; Vicenzino & Twomey 1993) demonstrated no clear patterns that are comparable to Fryette’s laws.*
What about validity and reliability?

- Eg.: De Kleyn’s test is that reliable?
- Or the red flag questions for infections and neoplastic processes?
  - Did you lose weight?
  - Do you have more pain at night?
  - ...
WHAT do we teach our students as EP’s?

- Differential diagnosis in:
  - Morphological pathology (eg.: ACL rupture)
  - Functional pathology (eg.: movement restriction of a cranial suture)

- Pathophysiology:
  - Medical
  - Osteopathic
WHY do we teach these subjects as EP’s?

- We want our students to be able to:
  - Detect green, yellow, red flags
  - Differentiate pathologies from each other
  - Make up a treatment plan
  - In general: safety
The greatest challenge is:
- Do we know what we teach the students?
- Do we know why we teach those tests?
- Do we know as EP’s what the reliability of these tests is?
- Do we know as EP’s what the validity of these tests is?
- How much of these tests are being used by the professional osteopath in the field?
Why do we need that data as EP’s?

- Is it worth teaching these tests or diagnostic processes?
- Is it safe when we think it is safe?
- Is the treatment based on the right diagnosis?
- Maybe less is more?
- The professional osteopath needs to be well educated and be able to practice based on a reliable and valid examination method of the patient.
The project proposal

- An academic collaboration inbetween the OsEAN EP’s
- What:
  - STEP 1: Collection of all clinical tests/anamnestic protocols that are being thought
    - Medical / morphological tests / questions
    - Osteopathic / functional tests / questions
  - STEP 2: Analysis of current literature findings per test/anamnestic protocol (reliability/validity)
    - This work will be divided over several schools and several dissertations
    - Lack of literature on a test/anamnesis question does not mean exclusion
The project proposal

1. Collection
2. Literature study
3. CRT study
4. Data publication

- **STEP 3**: CRT's need to be conducted on the tests and anamnestic protocols that remain unexplored in current literature
  - Again this is work for several institutions and several students/researchers.
- **STEP 4**: Collection of all the data and describe per test or anamnestic protocol the:
  - The frequency of application in the working field
  - The scientific relevance
What with the outcome of the study

- The results should be published and spread towards all osteopathic institutions.
- It can also be very helpful for professional organizations to defend
  - the working principals of our diagnostic reasoning
  - the first line access of the osteopathic profession
Thank you for your attention.

Questions?

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