Obstacles and Success of Performing OMT in Rural Ecuador

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BIOM-OMED
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Background

• 11 incoming OMS-II students from ACOM
• Dr. Kevin Hayes, Chair of Osteopathic Practice & Principles
• Dr. Mark Hernandez, PhD of Pharmacology
• July 2\textsuperscript{nd} – 10\textsuperscript{th}, 2016
• Quito, Ecuador to northern providence of Imbabura
• Local physician Dr. Juan Felipe Alarcón of ANAMER
3 regions visited: Peñaherrera, Valle del Chota, Otavalo

Source: Google maps.
Trip Objectives

• To expose students to healthcare in a developing nation alongside cultural immersion
• To utilize skills developed in the first year of osteopathic medical education to assist with acquisition of history, physical examination and development of treatment plan
• To practice and educate people on the practice and principles of Osteopathic Manipulative Medicine
Terms

• Somatic Dysfunction (SD)
• Osteopathic Manipulative Medicine (OMM)
• Osteopathic Manipulative Treatment (OMT)
• Counterstrain (CS)
  – Utilized in this study on the shoulder girdle
• Ligamentous-Articular Strain (LAS)
  – Utilized in this study on the knee
Methods

• Students performed osteopathic screening examinations on patients with MSK pain complaints
  – Somatic dysfunction was diagnosed when indicated
  – Common mnemonic TART aids diagnosis

<table>
<thead>
<tr>
<th>T</th>
<th>Tissue texture changes (boggy, ropy, hypertonic)</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>Asymmetry</td>
</tr>
<tr>
<td>R</td>
<td>Restriction of motion (decreased ROM)</td>
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<tr>
<td>T</td>
<td>Tenderness (pain, discomfort)</td>
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Methods

• After diagnosis of SD was made, OMT was performed under the supervision of Dr. Hayes
• Patients were reassessed for range of motion (ROM) and pain level after treatment
• Treatment was considered to have a positive outcome if:
  – Patient expressed pain relief
  – Practitioner felt tissue release and/or noted improved ROM or joint positioning
Counterstrain (CS)

• Indirect method that utilizes body positioning to halt inappropriate nociceptive activity
  – Move the somatic dysfunction away from the restrictive barrier
  – Shortens the affected muscle allowing for neurological de-facilitation

• Position held for >90 seconds or until tissue texture change, patient then returned to neutral and is reassessed
Muscles treated most often:
Supraspinatous, infraspinatous, teres minor
Ligamentous-Articular Strain (LAS)

- Used as a direct method to rectify abnormal tension of opposing ligaments
- Motion test to diagnose preferred positioning of the joint complex
  - Challenge the bony segment to approach its restrictive barrier
  - Hold until release of tissue is felt
- Patient is returned to neutral and is reassessed
AKA the “Million Dollar Knee Technique”
Results: Shoulder CS

• 26 patients were treated with CS of the shoulder girdle muscles
• 22 had positive outcome as previously defined
  – 85% success rate
Results: Knee LAS

• 65 patients were treated with LAS of the knee
• 57 had positive result
  – 88% success rate
Discussion

• Many factors contributing to SD in these rural populations:
  – Manual labor (agriculture, livestock industries)
  – Rough terrain and elevation
  – Poor sanitation
  – Nutritional deficiencies
  – Barriers to receiving medical treatment
    • Inadequacies of the healthcare system
    • Lack of care in some remote rural settings
Discussion

• Many obstacles to OMT including:
  – Lack of proper exam tables
    • Improvisation!
  – Language barrier difficulties given distinctive dialects of the 3 populations visited
  – Inability for patient follow up
• Despite obstacles, success was achieved with lasting effect in many patient cases
Conclusion

• ACOM students and faculty successfully endeavored on this outreach mission and treated 234 patients over a 3 day period
• Students were able to utilize OMT under supervision with measured success
• Patients were very receptive to OMT and eager for healing
  – Exemplifies core ideals of the osteopathic profession
• Lessons learned for future missions will be carried forward
Call To Action: Why Perform OMT Abroad

- OMT can be used as a “free” procedure only requiring the skilled hands of an osteopath, in any setting
- All people are eager to be touched and have their pain addressed
- When used responsibly and conservatively, can greatly improve lifestyle of low or no income patients
- *We need to continue compiling data on its efficacy abroad*
Acknowledgements

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Questions?
Thank You!