

## **ISMETA Presents...**

*How to Read (and Write!)*

*Case Reports*

Ruth Werner, BCTMB

### Our Goals

- Review principles of research literacy
- Get reacquainted with IMRaD
- Look at a couple of great case reports
- Get ready to step up!

### Evidence-Informed Practice

- Current research +
- Provider judgment +
- Client values =

***BEST PRACTICES***

Research is Relevant because...

It leads us to better client outcomes.

Research Pyramid: a Hierarchy of Evidence

What a Case Report Is and Isn't

#### **IS**

- Observational
- Real-life setting
- Goal oriented
- Quantitative

#### **ISN'T**

- Experimental
- In a research setting
- Open-ended
- Primarily qualitative

What are Case Reports Good For?

Sharing amazing "I have a client who" stories

Enriching the practice of colleagues

Providing other health care providers with a window into our work

## Research Literacy

- Finding what you need
- Making sense of what you find
- Evaluating what you find
- Applying results

## MAKING SENSE OF WHAT YOU FIND: **IMRaD**

### IMRaD

#### (Abstract)

- Thumbnail sketch
- Not enough to draw conclusions

### IMRaD

- Introduction: an observation leads to a hypothesis (literature review)
  - Why is this topic interesting or important?
  - What have other people done with the same topic?
  - Why this approach makes sense
  - The objective or hypothesis

### IMRaD

- Methods– includes description of...
  - Practitioners
  - Study participants
  - Randomization process (if applicable)
  - Intervention (with enough detail to be replicable)
  - Measuring tools (including surveys or questionnaires)

### IMRaD

- Results (what happened)
  - Any adverse events?

### IMRaD

- Discussion
  - What this means
  - How it connects with other research
  - What the weaknesses were
  - What should come next?

### IMRaD

- (References)
  - How deeply the scientist looked at supporting materials
  - Primary vs. other types, places in research hierarchy

## Case Report #1:

# Assessing the Effectiveness of Massage Therapy for Bilateral Cleft Lip Reconstruction Scars

## Introduction

Definition of bilateral cleft lip

Requires several surgeries, can leave substantial scar tissue

Scar tissue impairments

Adhesions, muscle weakness, facial appearance and asymmetry

Previous research on manual therapies and scar tissue

To address adhesions, local tissue function

Hypothesis

Massage therapy may be able to help with muscle strength, range of motion, pliability of tissue

Massage therapy may improve acceptance of facial appearance

## Methods

Therapist: massage therapy student

Client = 19 year old male, born with bilateral cleft lip and palate

History of 3 surgeries

Sense of restriction, weakness, fatigability of facial muscles

Decrease in self-confidence

Informed consent for case report and use of photos

Treatment plan

Subjective assessment:

1-10 scales for restrictions/acceptance, taken weekly

Objective assessment:

Photographs pre/post series

Therapist palpation of scarring

“pen test”

Plan of care

5 weekly treatments

75 minutes

## Results

Subjective assessments

Reduced sense of restriction

Improved sense of acceptance

## Objective assessments

Palpation of tissues showed adhesions had reduced in depth and size; muscle tension in lower lip and cheeks also reduced

## Photos show

Improvement in range, appearance, symmetry  
Decrease in scar visibility  
Increase in range (smile now shows upper gum line)  
(puckering is about the same)

## Pen test

0 seconds on week 1

15+ seconds on week 5

<https://www.youtube.com/watch?v=4uTr5mNQSKQ&feature=youtu.be>

## Discussion

Charts, photos demonstrate improvements

Correlation between sense of restriction and acceptance

Photos also showed some possible resolution of edema

## Limitations

Needs more standardized tests

Needs objective way to measure range of motion, change in quality of scar tissue

## For future research

Look at scar tissue restriction and self-esteem

Look at scar tissue treatment in younger patients for more complete resolution

## Questions?

## Case Report #2

### **Dynamic Angular Petrissage as Treatment for Axillary Web Syndrome Occurring After Surgery for Breast Cancer: a Case Report**

#### Introduction

Definition and description of axillary cording/webbing

Common complication of breast cancer surgery

Can run from axilla all the way to the wrist and thumb

Can affect the chest wall

Sometimes self-limiting (maybe not as often as hoped for)

No widely accepted standard of care

Many manual therapy approaches

Little scientific research

Research question:

Will this approach to manual therapy improve upper extremity movement associated with pain and restricted mobility in areas affected by AWS?

#### Methods

Retrospective case report

2 treatment visits (1.5, 1 hour) within 5 days; follow-up non-treatment visit 14 weeks later

#### Client

45-year old woman with AWS

Pain with movement on left side, visually evident cording to wrist

Mastectomy was 6.5 weeks previous to 1<sup>st</sup> massage therapy session

Pursued after consulting surgeon

“pain, tightness, a ‘tugging’ under the skin and a visible ropey tightness .... This ‘rope’ extends all the way down my arm, especially with pain at the elbow and again at the inner wrist. When I press anywhere on this pathway down the arm, there’s a stinging tight pain. ... [The rope] originates near a bubble of stitched skin at my axilla”.

#### Assessment measures

Visual inspection of client posture

Active ROM observation

Passive ROM performed by therapist

Glenohumeral flexion as measured by goniometer

Self-rated movement-associated pain

Visual inspection of cording

Palpation of cording

Monitoring lymphedema signs and symptoms

## Client goals

- To regain freedom of movement of shoulder, elbow, wrist
- To eliminate movement-associated pain
- To regain normal function and ability to do self-care (e.g., underarm shaving)
- Informed consent obtained for case report and photos

## Therapeutic intervention

Provider: RMT in Ontario with specialty in several clinical challenges, including breast cancer care

### Techniques:

- “Dynamic angular petrissage”, combines aspects of traditional Swedish massage and passive-relaxed movement
- Full description provided of technique and sessions

## Results

### After session 1

- Client reports reduction in movement-associated pain
- ROM at glenohumeral joint is improved
- Cord was reduced
- No pain during treatment
- “Massive relief” at wrist and elbow
- Client describes “70% improvement”

### After session 2

- Pain is at 0/10
- No restrictions in movement
- No pain during treatment

### Long-term outcomes

- 14.5 weeks later
- No further intervention beyond home-care exercises
  - ROM is full and normal
  - No signs of AWS
  - No pain with movement
  - No signs or symptoms of lymphedema

## Discussion

- DAP was a safe and painless option for this client
- Mechanisms not known, but maybe...
  - Highly controlled and specific combinations of movement and pressure help to change and loosen connective tissue problems
  - No rupture of the cord means no inflammatory response with more scar tissue
  - Reduction of pain and guarding may improve muscle function

Limitations

One client

Built-in bias

Questions?

### **Are You Ready?**

Retrospective or prospective?

Client goals– are they measurable?

Case reports are typically quantitative, although they may have qualitative aspects and commentary

What do you need for your IMRaD?

Literature review to inform your choices and to give context for your work

Methods– how will you describe them?

Results– how will you report them?

Discussion– how will you put your findings in context?

Resources Available to YOU

Massagetherapyfoundation.org

*International Journal of Therapeutic Massage and Bodywork* (ijtmb.org)

CARE guidelines,

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4145002/>

Guidelines for Student Case Report Contest

Free research webinars

Case report webinar series

Research Perch podcasts and blogs

E-books

How to Connect with a Researcher

Myths and Truths about Massage Therapy

Instructor's Guide to Teaching Research

Some other great case reports

Bowenwork for Migraine Relief: a Case Report

Sandra L. Gustafson, MHS, BSN, RN

<http://www.ijtmb.org/index.php/ijtmb/article/view/296>

Therapeutic Massage Provides Pain Relief to a Client with Morton's Neuroma

Faith Davis, BA, RMT, NCBTMB, AOS

<https://www.ijtmb.org/index.php/ijtmb/article/view/161>

Concussion Treatment Using Massage Techniques: a Case Study

Sylvia L. Burns, M.ED., LMP

<https://www.ijtmb.org/index.php/ijtmb/article/view/241>

Other questions?

(a little self-promotion)

Come visit me, get on my mailing list ([ruthwerner.com](http://ruthwerner.com))

Soon to come: online, self-paced courses in MT and pathology

**THANK YOU ISMETA!**