The Importance of Students Using Evidence to Inform Clinical Decisions

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Standards Committee
Canada

Challenge of integration of Evidence to Inform Clinical Decisions

See this:
- Personally in Clinical Practice
- Personally with Manual Therapy Teaching for the Canadian System
- Submissions to the Standards Committee
Challenge Putting Evidence Into Practice

- Identifying the Relevant Evidence
- Levels of Evidence
- Interpretation of Evidence
- Thinking Points
- Putting Evidence into Clinical Practice

Identifying the Relevant Evidence

- Tying it to a practice topic matter i.e. muscle strains
- Tying this to a specific case that exists in the literature:
  - Risk factors and management for groin injuries

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Detection, Prevention & Management: Groin & Hamstring Injury in Sport

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Identifying the Relevant Evidence

- Clinical Presentation
- What is it
Groin Strain Injury:
- abdominal
- hip flexor
- hip adductor
- Abdominal & inguinal hernias

Identifying the Relevant Evidence

- Clinical Presentation
- What is it
- Who gets it

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Groin strain injury top one to 6th most common cited injury in the sports:
- hockey
- soccer
- rugby
- calisthenics
- cricket

- Sport-specific groin strain injury rates vary in the literature from 0.2 to 5.17 injuries/1000 participation hours. [3, 7-12, 21]


Identifying the Relevant Evidence
Clinical Presentation
- What is it
- Who gets it
- What are the clinical tests & findings
Clinical Presentation

- sudden onset of medial/anterior upper thigh pain
- associated localized tenderness & loss of function
- may be localized swelling & tenderness
- may not be any ecchymosis
- unusual to have a palpable defect
- may be insidious with poor localization of pain


a) Squeeze test (hips 45 / knees 90 = p.)
b) Bilateral adductor test (hips 30 flex, sl AB, sl IR = p.)
c) Single adductor test (either side = p.)
Levels of Evidence

- Experimental
  - Randomized controlled trials
- Observational
  - Cohort studies
  - Case-control studies
  - Cross-sectional studies
  - Case series
  - Case reports
- Expert opinion

Results of Systematic Review

- 175 potential → 11 studies identified

- Soccer – 2
- Rugby – 2
- Aussie rules football – 2
- Hockey – 4
- Swimming – 1
- Cohort – 8
- Intervention – 1
- CSS – 1
- Case Control – 1
Clinical Reasoning is a Sequenced Integration of:

Knowledge

Science

Art

Barrows Hs, Tamblyn RM 1980.

Knowledge

Experts differ from novice in ability to recall meaningful selective

Three Types of Knowledge:

- Propositional: derived from research
- Professional: derived from practice
- Personal: derived from self
Interpretation of Evidence

Criteria of Judgement
- Consistency of independent investigations
- Strength of association (dose response)
- Specificity of association
- Temporal relationship
- Coherence (biological plausibility)

Risk Factors for Groin Strain:

Consistent evidence
- Previous injury
- Adductor:Abductor Ratio:
  - adductor:abductor muscle strength ratio of less than 80%
- Core Control:
  - Two intervention studies
- Decreased levels of pre-season sport-specific training
Consistency: Previous Injury

- Rationalization for post injury rehabilitation of specific exercises to prevent injury reoccurrence

- Investigated in the lumbar spine: immediately post injury = multifidus atrophy & contraction onset delayed of transversus abdominis

Hodges P, Richardson C. Phys Ther 1997;77(2):132-142

Just because we cannot always prove a hypothesis does not mean that we cannot or should not think about it.

V. Janda
Thinking Points

Intersperse “thinking points” that:

- may drive future research in this area
- tie in previous lectures and other information i.e. hamstring strain literature
- stimulate discussion

THINKING POINT:

- It may be that the adductor strength (i.e. concentric and eccentric) throughout its length may be important for injury prevention.
Putting Evidence into Clinical Practice

Practical application of previous information

Isometric contraction of adductors:
- Coordination of hip joint related muscles & torso muscles with dynamic exercise

a) Without torso movement

b) With torso movement
Putting Evidence into Clinical Practice

- Practical application of previous information
- Skills to self evaluate effectiveness
- Test – retest
- Outcome measures

FABERE / Patrick’s TEST

- Heel of painful side placed on knee of other leg
- Knee of affected side remains elevated
  i.e. flexion, abduction, external rotation & extension

Positive Fabere Test
Challenge Putting Evidence Into Practice

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Good Luck & On Behalf of Your Profession & Patients

Thank you