Evidence Based Approach to the Treatment of Subacromial Impingement Syndrome with Kinesiology Tape

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Thank you
Outline

• Quicker reminder on evidence based practice
• PICO Question
• Anatomy of the Subacromial Arch
• Subacromial Impingement Syndrome Epidemiology
• Traditional Treatments
• A Brief Overview of Kinesiology Taping
• Use of Kinesiology Taping to Treat Subacromial Impingement Syndrome
• Conclusions
Evidence Based Practice
What is evidence based practice?

• Incorporates
  • Best Research Evidence
  • Clinical Expertise
  • Patient Values and Preferences
PICO Question
PICO Question

- **Patients** – Patients suffering from subacromial impingement syndrome
- **Intervention** – Kinesiology Taping
- **Control** – Conventional Treatment
- **Outcome** – Reduction in amount of pain and disability
Anatomy of the Subacromial Arch
Subacromial Arch
Subacromial Arch

• Major structures of note
  • Supraspinatus tendon
  • Long head of the biceps brachii
  • Subacromial bursa
Subacromial Arch
Types of Acromion Processes

- Type I – Flat Acromion
Types of Acromion Processes
Types of Acromion Processes

- Type I – Flat Acromion
- Type II – Gently Curved Acromion
Types of Acromion Processes
Types of Acromion Processes

- Type I – Flat Acromion
- Type II – Gently Curved Acromion
- Type III – Hooked Acromion
Types of Acromion Processes
Types of Acromion Processes

- Type I – Flat Acromion
- Type II – Gently Curved Acromion
- Type III – Hooked Acromion
- *Type IV – Acromion with Inferior Spur
Types of Acromion Processes
Subacromial Impingement Syndrome
Epidemiology
Subacromial Impingement Syndrome

• Collection of conditions with similar symptoms
  • Subacromial bursitis
Subacromial Impingement Syndrome
Subacromial Impingement Syndrome

- Collection of conditions with similar symptoms
  - Subacromial bursitis
  - Rotator cuff tendinopathy
Subacromial Impingement Syndrome
Subacromial Impingement Syndrome

• Collection of conditions with similar symptoms
  • Subacromial bursitis
  • Rotator cuff tendinopathy
  • Rotator cuff strains/ruptures
Subacromial Impingement Syndrome
Subacromial Impingement Syndrome

- Collection of conditions with similar symptoms
  - Subacromial bursitis
  - Rotator cuff tendinopathy
  - Rotator cuff strains/ruptures
  - Biceps brachii tendinopathy
Subacromial Impingement Syndrome
Subacromial Impingement Syndrome

• In patients suffering from shoulder pain, SIS accounts for as many as 2/3 of cases.

• Seen often in patients involved in overhead physical activity.
Subacromial Impingement Syndrome

• Common Causes:
  • Spur formation under the acromion process
  • Tension on the coracoacromial ligament
  • Changes to the shape of the acromion process
  • Rotator cuff strains
  • Tendinopathies related to overuse
Subacromial Impingement Syndrome

• Signs & Symptoms
  • Anterolateral shoulder pain
  • Pain with active glenohumeral abduction
  • Weakness with resisted glenohumeral external rotation
  • (+) Neer’s Impingement Test
  • (+) Hawkins-Kennedy Test
Why the refresher?
Common Treatments
Treating SIS

• Best practices are widely debated

• Commonly accepted that therapeutic exercise needs to be part of all treatment plans
  • Only outcome that improved across 11 RCTs was pain
    • What about:
      • Strength?
      • ROM?
      • Function?
Treating SIS

• Other commonly reported treatments:
  • Oral NSAIDs
  • Oral analgesics
  • Steroidal injections
  • Cryotherapy
Treating SIS

• If conservative treatment fails, surgical interventions are indicated.
  • Acromioplasty
Treating SIS
Treating SIS

- If conservative treatment fails, surgical interventions are indicated.
  - Acromioplasty
  - Distal clavicle excision
Treating SIS
Treating SIS

• If conservative treatment fails, surgical interventions are indicated.
  • Acromioplasty
  • Distal clavicle excision
  • Subacromial Debridement
Treating SIS
Kinesiology Taping
Kinesiology Taping

• Popular modality for treating a variety of musculoskeletal conditions

• Shown to improve outcomes such as pain and disability

• Mode of action is still a topic of debate
  • Mechanical?
  • Neurological?
Kinesiology Taping

• Has become more widely used for a variety of shoulder pathologies
  • Rotator cuff pathology
  • Biceps tendinopathy
  • Postural correction
  • Subacromial impingement syndrome
Kinesiology Taping

• Shown to improve patient reported outcomes such as pain and disability

• Certain patterns of taping have been found to increase subacromial distance
Kinesiology Taping
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Kinesiology Taping

• Shown to improve patient reported outcomes such as pain and disability

• Certain patterns of taping have been found to increase subacromial distance

• Improves pain free active range of motion
  • Abduction
  • Flexion
Kinesiology Taping
Demonstration
Considerations

• Does your patient have a latex allergy?

• Postural corrections?
Conclusions
Conclusions

- Clinicians working with patients participating in overhead activities will encounter SIS at some point in their careers.
- There is still no universally accepted treatment protocol.
- Failure of conservative treatment necessitates surgical intervention.
Conclusions

• Kinesiology taping shows promising results
  • Decreased pain
  • Increased function
  • Increased subacromial arch space
  • Increase pain free active range of motion

• Different methods have been used in the past to achieve these goals.
Quiz Time
Question 1

• Which of the following is NOT a structure involved with subacromial impingement syndrome?
  • Supraspinatus tendon
  • Infraspinatus tendon
  • Long head of the biceps tendon
  • Subacromial bursa
Question 1

- Which of the following is NOT a structure involved with subacromial impingement syndrome?
  - Supraspinatus tendon
  - Infraspinatus tendon
  - Long head of the biceps tendon
  - Subacromial bursa
Question 2

• True/False: There are never surgical implications for subacromial impingement syndrome.
Question 2

• True/False: There are never surgical implications for subacromial impingement syndrome.
Question 3

• True/False: Latex allergies are not a consideration for kinesiology taping.
Question 3

• True/False: Latex allergies are not a consideration for kinesiology taping.
Question 4

• True/False: Forward or rounded shoulders can increase the risk of developing subacromial impingement syndrome
Question 4

- **True/False**: Forward or rounded shoulders can increase the risk of developing subacromial impingement syndrome
Question 5

- Which of the following has been used to demonstrate that kinesiology taping can have a decompressive effect on the subacromial space?
  - Diagnostic Ultrasound
  - X-ray
  - MRI
  - CT-Scan
Question 5

• Which of the following has been used to demonstrate that kinesiology taping can have a decompressive effect on the subacromial space?
  • **Diagnostic Ultrasound**
  • X-ray
  • MRI
  • CT-Scan


Questions