Professional Violinists and Left Shoulder Girdle Overuse Syndrome

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PURPOSE
The purpose of this research poster is to identify the impact of performance-related repetitive overuse syndromes. Focus will be on the incidence, prevalence, predisposing factors, and the musical community’s perceptions about performance-related injuries. Using this information, a clinical practice guideline (CPG) will be developed focusing on assessment, treatment, and prevention of performance-related repetitive overuse syndromes of the left shoulder girdle in professional violinists.

DEFINITION
Overuse syndrome is a painful condition caused by excessive use of an extremity, creating stress on the tissues beyond their anatomic and physiologic limits. Predominant symptoms are pain and tenderness in a particular muscle group, swelling, weakness, and impairment of control in some cases.

ASSESSMENT
Primary focus is on breaking the pain cycle:
• Decrease practice hours and increase number of rests during practice.
• Gentle stretching of tight left shoulder girdle and neck muscles.
• Adjunct therapies can include ice, massage, analgesics, and anti-inflammatories.

Primary focus is on improving muscle strength of left shoulder girdle and postural correction:
• Begin initially with isometric strengthening of the left shoulder girdle muscles. Strengthen left shoulder flexors, extensors, abductors, adductors, internal and external rotators.
• Progress to isotonic strengthening of the left shoulder girdle muscles. In addition to above-mentioned muscle groups, strengthen scapular retractors, protractors, and middle and upper trapezius.
• Introduce the concept of postural correction or retraining. Begin with postural exercises without violin and progress to exercises incorporating the violin.

POUNTS OF INTEREST
• String players have the highest prevalence (66%) of musculoskeletal complications compared to other musical instrumentalists.
• Predisposing factors include:
  i. poor posture
  ii. long/increased practice times
  iii. awkward positioning
  iv. stressful technique
  v. inefficient movement
  vi. static positions
  vii. change in playing technique
  viii. increased psychological stress

• 95% of the injured musicians surveyed continued to play in spite of their injury and many regard pain as a normal component of music making.
• In a survey of music teachers, more than half of the instructors believed that less than 10% of their students suffered from musculoskeletal injury.
  • The low frequency may be due to the reluctance of some students to disclose injuries to their teachers and/or the teachers are reluctant to disclose a higher frequency of injuries for fear of peer pressure.

Clinical Practice Guideline

STAGE ONE
Primary focus is on improving muscle strength of left shoulder girdle:  
• String players have the highest prevalence (66%) of musculoskeletal complications compared to other musical instrumentalists.

STAGE TWO
Primary focus is on return to play and education related to the prevention of reoccurrence:
• Return to play: Begin gradual increase in playing hours.  
  • Incorporate warm-up and cool down exercises. Plan your practice schedule to balance low intensity pieces with high intensity pieces, and take breaks accordingly.  
  • Advise musician not to play with pain.

STAGE THREE
Address ergonomics of playing environment.  
• Prevent reoccurrence: Prescribe adaptive equipment as necessary.  
  • Education on the incorporation of rest, relaxation, healthy diet and general exercise program to improve overall fitness level.  
  • Reassess posture, playing technique, and environment and modify to prevent reoccurrence.