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Purpose
The purpose of this case report was to detail a conservative, effective treatment plan utilizing manual and exercise therapy techniques for a patient with chronic costochondritis.

Description
• **History:** The patient was a 32-year-old male office worker with a two year history of costochondritis. His primary complaint was 5/10 pain over the 3rd and 4th left costosternal joints. Pain increased with deep breathing. Pain increased 24-48 hours following bouts of heavy lifting. Tenderness to palpation (TTP) of 1st, 9th and 10th thoracic and 7th cervical vertebrae (T9-10 and C7-T1). All previous treatments were unsuccessful.

Plan of Care
• The patient attended a total of three 60-minute treatment sessions over a period of two weeks. **Manual interventions:** myofascial release (MFR) of the 3rd and 4th ribs, MFR of the respiratory diaphragm, strain counterstrain (S-CS) of bilateral pec minors.

• **Exercise interventions:**
  - Theraband rows
  - Theraband shoulder extensions
  - Foam roll chest opening stretch

• **Educational interventions:** Included postural correction and avoidance of exacerbating activities

• **Home Exercise Program:** Included all previous exercise interventions as well as a self performed strain-counterstrain position for the pectoralis minor

Observations

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<th>Pain at worst (VAS)</th>
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<td>Initial</td>
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**Limitations**
Applicability of the results are limited due to this being a case report as well as the relatively low prevalence of the condition.

**Acknowledgements**

References

5. Lek:
6. Strain-counterstrain
7. Right pec minor
8. MFR 3rd and 4th ribs

• Costochondritis is one of the most common sources of musculoskeletal chest pain
• Most often occurs in females over the age of 40 or as a result of strenuous activity.
• Typical medical treatment consists of pharmacologic symptom management rather than elimination of the source of the dysfunction.
• Typical PT treatment includes HVLA manipulative techniques.

Factors contributing to efficacy:
- Patient adherence
- Responsiveness to exercise
- Elimination of aggravating factors

The gentle manual techniques may have acted in an analgesic manner.

Additional research concerning the efficacy of similar treatment plans is warranted.