

Chest Wall Pain in a recreational Weightlifter.

Khan MN¹, Pujalte GA². ¹Department of Family and Community Medicine, Penn State University / The Good Samaritan Hospital residency training program, PA. E-mail: mkhan5@hmc.psu.edu. ²Departments of Family and Community Medicine, and Orthopaedics and Rehabilitation, Penn State Hershey Medical Center, Hershey, PA. E-mail: gpujalte@hmc.psu.edu.

HISTORY: We present a case of a 21-year-old gentleman who was seen in the clinic as a consult for musculoskeletal chest pain. He was noted to be an avid weight lifter who was right-hand dominant.

While he was lifting weights around two years back, he felt a sudden sharp pain over the top of his sternum. Since then, he noted a "lump" over the anterior chest wall. While working out, he would feel a sharp pain over his lump, 6/10 in intensity. The pain did not radiate and was not associated with any numbness or tingling. The pain was intermittent and aggravated by bench presses, butterfly workouts and dips. Lifting weights above his head also increased the pain. The pain was alleviated by rest but took several hours to go away every time. His day-to-day functionality had significantly worsened in the last ten days.

He was studying at a culinary school and had to do heavy lifting at work and school as well. When he was in the kitchen lifting 50 pounds of bacon above his head or taking off an overhead shelf, he would note pain at the same spot which would be 6-7/10 in intensity. Carrying tubs of food in front of him increased his pain. He found that pulling motions were more painful than pushing motions. He found that if he moved his chest out and took a deep breath, the area of pain would "pop" and he would get some relief.

PHYSICAL EXAMINATION: He was a well-built male. Vital signs were normal. He had an adynamic precordium, distinct heart sounds, normal rate and regular rhythm without any murmurs or gallops. Lungs were clear to auscultation bilaterally. He had normal range of motion of both shoulders. He had pain over the manubriosternal junction on resisted forward flexion and resisted internal rotation of his left shoulder. He was point tender over the manubriosternal junction, and there was a 2cm diameter palpable prominence that was tender over this location. Sensation was intact and equal on bilateral upper extremities.

DIFFERENTIAL DIAGNOSES:

1. Costochondritis
2. Sternoclavicular joint injury
3. Pectoralis strain
4. Manubriosternal injury

TEST AND RESULTS:

PA and Lateral views of X-rays of the chest and chest wall were significant for mild vacuum phenomenon at the manubriosternal joint suggesting a mild degree of degeneration, otherwise noted to be normal.

CXR (lateral view):



FINAL/WORKING DIAGNOSIS: Manubriosternal injury

TREATMENT AND OUTCOMES: We advised him to rest and alternate applications of ice and heat to the painful area regularly. We advised him to avoid any activities, positions or exercises which caused pain over this location. We prescribed ibuprofen and a Flector patch. We referred him to Physical Therapy.

The patient was seen in Physical Therapy 2 times per week for 2 weeks. His physical therapist employed dynamic strengthening and started a stretching program. He was placed on a foam roller for 5 minutes, then instructed on strain-counterstrain techniques for the costochondral junctions and ribs. He was then instructed in using those techniques with him leaning up against a wall, with arms behind him, going down along the wall. The patient was instructed to do rehab exercises twice per day. Modalities and manual techniques were employed as well. He was eventually discharged on a home exercise program.

On follow-up 6 weeks later, the patient had improved significantly. He had started participating in yoga and weightlifting again with insignificant pain.