

Chest Pain—Cardiac Origin or Myofascial Origin: A Case Report

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ABSTRACT

Background: Myofascial pain is one of the common clinical findings in patients who present with musculoskeletal pain. The main symptom of chronic myofascial pain is ongoing or longer lasting muscle pain in areas such as the low back, neck, shoulders, and chest. You might feel the pain or the pain may get worse when you press on a trigger point. The muscle may be swollen or hard and you may hear it called a “taut band” in the muscle. Sometimes it may associate with interspinous ligaments or other systems.

Case description: A 65-year-old female patient came with complaint of severe axial and left-sided chest and back pain since 2 years, which was mixed in character and of aching, burning, stabbing type, with numeric rating scale (NRS) of 8/10 and the score on pain detect tool was 18. On examination the patient had normal skin and had no scar or redness of the overlying skin. On palpation, the patient had tenderness over midline at T3-4 vertebral level and also had myofascial trigger point over left trapezius. The pain aggravated on flexion of the neck. Systemic examination was normal. Based on these findings, our provisional diagnosis was interspinous ligament sprain with myofascial trigger point. Subsequently trigger point injection of left trapezius with 1 mL lignocaine hydrochloride 2% along with injection of platelet-rich plasma 0.5 mL for T3-4 interspinous sprain was administered. Interventional procedure was done after withholding the anticoagulants (tab aspirin 75 mg and clopidogrel 75 mg) for 7 days. On follow-up visit after 1 month, the patient reported excellent pain relief with an NRS score of 1 to 2.

Conclusion: Trigger point over back can cause burning numbness and tingling if it entraps a nerve and can lead to pain that emulates like pain due to cardiac problems. So a proper clinical examination must be done for every chest pain. As every chest pain is not originated from the heart, it may be myofascial in origin.

Keywords: Cardiac disease, Interspinous ligament sprain, Myofascial pain syndrome.

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INTRODUCTION

Myofascial pain is one of the common clinical condition in patients presenting with chronic pain. However, only a very limited number of academic programs include scientific courses on the identification and management of myofascial trigger point. Despite this, there is an impressive surge over the last decade in the number of high-quality research articles, literature reviews, and case studies providing a solid basis for integrating myofascial pain concept into clinical practice and academic preparation.¹ Interspinous ligament is one of the pain generator of the back and is often difficult to diagnose by radiological imaging. However, it can be confirmed by clinical examination and local anesthetic injection.²

CASE DESCRIPTION

Sixty-five-year-old female patient came with complaint of severe midline upper back pain and left-sided chest pain on and off since 2 years, which become persistent since the last 1 month with increased pain intensity. Pain was of aching, burning, stabbing type with NRS score of 8/10 and the score on pain detect tool was 18. No diurnal variation in pain was reported by the patient. The pain led to disturbed sleep. Midline upper back pain aggravates on neck movement especially with neck flexion.

The patient had a history of percutaneous transluminal coronary angioplasty (PTCA) 3 years ago and is currently on aspirin 75 mg once a day, clopidogrel 75 mg once a day, and statin. However, 1 year after PTCA, the patient started complaining of similar pain. Therefore, she visited a cardiologist and underwent coronary angiography with results showing no abnormality. However, she continued to suffer from similar pain. So she repeatedly visited

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different cardiologists and after thorough evaluation it was concluded that pain is not of cardiac origin.

After that patient was referred to us for further evaluation and management. On examination, the patient had normal skin and no scar or redness of the overlying skin. On palpation, the patient had tenderness over midline at T3-4 vertebral level and also had myofascial trigger point over left trapezius. The pain aggravated on flexion and right lateral bending of the neck. Systemic examination was normal. Based on these findings, our provisional diagnosis was interspinous ligament sprain with myofascial trigger point of left

trapezius. For the above-mentioned condition, tablet baclofen and etodolac was prescribed for 2 weeks, but no significant relief was reported, i.e., patient reported NRS score 7/10 on follow-up after 2 weeks.

Subsequent intervention was planned. Clopidogrel was withheld for 7 days based on cardiologist consultation. Basic investigation and coagulation studies were done, which were within the normal limit. The trigger point injection of left trapezius with lignocaine hydrochloride 2% and injection of platelet-rich plasma 0.5 mL for T3-4 interspinous sprain were administered. Baclofen was continued for the next 15 days. On follow-up visit after 1 month, the patient reported excellent pain relief with an NRS score of 1/10.

DISCUSSION

Myofascial pain syndrome diagnosis requires detailed knowledge of motor end plate, the sarcomere assembly, the nature of the taut band, which also contains a sensory component, a motor component, and an autonomic component. This comprises a new “integral hypothesis” which involves local myofascial tissues, the central nervous system and, the systemic biochemical factors. It helps to review new concepts and to describe our approach to treat myofascial syndrome.^{3,4}

The interspinous ligaments are sheets of fibrous tissues that extend between spines of vertebrae throughout the vertebral column. These ligaments vary from quite thin in the thoracic spine and characteristically broader and thicker in the lumbar vertebral segments. Interspinous ligament can cause acute or chronic spinal axial pain.⁵

Myofascial pain syndrome are not only painful on affected muscle but also affect the surrounding tissues and can be associated with other pain generators.⁶ In this case, myofascial syndrome is present with interspinous ligament sprain. They can also coincide with other problems such as heart, bowel, and urinal. In this case, myofascial pain is coinciding with cardiac pain as the patient was a known case with cardiac disease.⁷⁻¹³

CONCLUSION

Our case suggests that a seemingly life-threatening symptom can be due to a non-life-threatening chronic problem, i.e., the myofascial pain syndrome. Every chest pain does not originate from

the heart, and it may be myofascial in origin.¹⁴ So once the serious cause of the symptom, i.e., the red flag is ruled out, the patient should be examined thoroughly to find the pain generator. For that we again stress on the age-old but ignored multidisciplinary approach for management of the patients.

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