

Lumbago, Cervicalgia, and Hypoxemia Oh My: An Osteopathic Approach.



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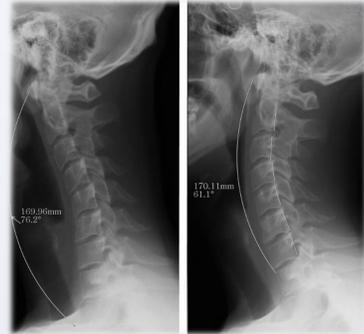
INTRODUCTION

Today, 80% of adults experience low back pain at some point in their lifetimes. It is the most common cause of job-related disability. After back pain, neck pain is the most frequent musculoskeletal cause of consultation in primary care worldwide. Two thirds of the population have experienced neck pain at some time in their lives that they seek out medical care and prevalence is highest in middle age. Hypoxemia indicating a low level of oxygen in the blood, is the result from any cause that influences the rate or volume of air entering the lungs. With this in mind, the pathophysiology in hypoxemia would be directly worsened by the changes observed in the musculature between the cervical and the low back paraspinal muscles. With untreated cervicalgia and lumbago, the musculature between becomes hypertonic and unable to move as freely. This results in poor thoracic wall and rib motion, which in a patient with existing hypoxemia would increase their exogenous oxygen demand and result in worsening parasternal and cervical lymphadenopathy. Untreated, this lymphadenopathy promotes congestion and poor lymphatic circulatory results in creates congestion resulting in an imbalance of the interstitial fluid, worsening immune surveillance, and worsening somatic dysfunction.

CASE SUMMARY

We present a case of a 48 year old female who presented a complaint of low back and neck pain and worsening dyspnea. She had experienced worsening moderate to severe neck pain in addition to low back pain that has been persistent in spite of corticosteroid interventions and chronic pain management. Additionally, the patient noted an increase in her work of breathing as her baseline use of oxygen was continuous at 2.5LPM via nasal cannula. However, the patient increased her oxygen use to 4LPM to maintain her oxygen level at 90%. Her lungs were clear to auscultation with a noted prolonged expiratory phase consistent with her previous diagnosis of COPD. She was compliant with her medications, denied any trauma to the affected areas and noted no fever or signs of infectious etiology to explain her increased work of breathing. It was noted on physical exam that she had reduced cervical and lumbar lordosis with cervical and parasternal lymphadenopathy. A 3 view chest X-ray showed no signs of an acute infectious process. However, It was noted that she had moderate reversal of the normal cervical and lumbar lordosis. OMT was performed which restored the normal lymphatic balance to the cervical and parasternal areas and her quantity and quality of motion in the cervical and lumbar areas improved greater than 70%. She was then able to decrease her oxygen flow to her baseline while maintaining her oxygen level greater than 90%.

FIGURES AND IMAGES



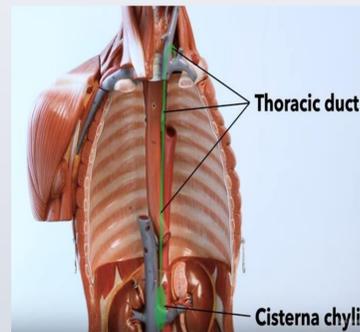
Flattening of the Cervical Lordosis



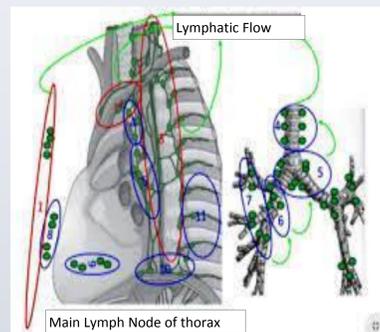
Hyper Inflation in a COPD Lung



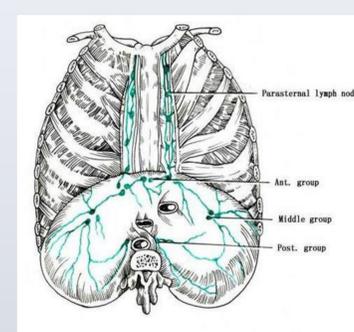
Flattening of the Lumbar Lordosis



Lymphatic Duct Drainage



Lymphatic Flow to thoracic duct



Parasternal Lymph Nodes



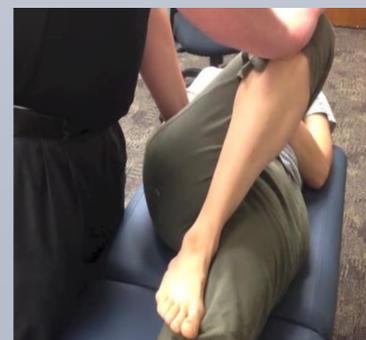
Posterior Rib Articulatory BLT



Lymphatic Drainage Technique



Cervical Lymphatic Chain



Lumbar Manipulation Utilizing Still



Myofascial Release of the Cervical Spine



Cervical Chain Drainage Technique

DISCUSSION

This case illustrates the importance of evaluating and treating somatic dysfunction in the presence of chronic disease and how OMT can augment treatment protocols thereby improving outcomes. In this case specifically, we were able to utilize OMT in addition to standard Acute on Chronic COPD Exacerbation medical treatments and minimize the distress the patient felt while experiencing worsening hypoxemia. The air hunger stimulated her stress response, which caused worsening acute exacerbation of her COPD which in turn worsened her somatic dysfunction creating a self-perpetuating cyclic process. Additionally, treatments can be stacked in affected areas of somatic dysfunction to more efficiently utilize our time and allow the maximum amount of osteopathic treatment to be utilized on the patient. As an osteopathic recognized residency program, we utilize this aspect of medicine often when treating patients. As stated by the AAFP, Pharmacotherapy, smoking cessation and pulmonary rehabilitation are the mainstays of treatment, long-term oxygen therapy, and surgery may be considered in select patients with COPD. However, integrating OMT should be considered with first line treatments as it can improve outcomes and we can improve the efficacy of our treatment protocols while maintaining our distinction as Osteopathic Physicians.

RESOURCES/REFERENCES

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