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RESEARCH ARTICLE

Musculoskeletal Pain: Sources Less Discussed During Health Provider Visits and How One Can Help Themselves

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Abstract

The purpose of this essay is to explore the various causes of pain that are not often discussed during physician office visits and to explore different methods on how to promote pain possible pain relieving measures. The methodology included researching various articles on sources of pain and ways to manage. Results concluded musculoskeletal pain has many precipitating factors including vitamin deficiencies, endocrine disorders, alcoholism, dehydration, medications, obesity, and diet. Pain alleviating methods are also discussed.

1. Introduction

Have you ever been in pain and were not able to contribute to the source of it? There were no falls, injuries, muscle tears or strains. There was no diagnosis of arthritis, multiple sclerosis, fibromyalgia, or any other musculoskeletal ailment you can derive as the source of pain and discomfort. All you can identify is you are uncomfortable, are aching, and sore. Sometimes, the causative factor of pain does not have to manifest as the obvious. Have you ever talked with your health care provider and complained of pain, and the solution was prescribing more pain medication only to continue to have discomfort and pain? If you find yourself in this predicament, ask yourself, "Did my healthcare provider delve in and ask me questions about your weight, or ever checked Vitamin D levels for insufficiency, medication side effects, the possibility of dehydration, hypothyroidism, diet, and alcohol use?" If these topics have not been explored during your visit and you find yourself constantly in pain and on pain medications, one or all of them could potentially be the culprit. Once a discovery has been made, taking the proper measures to alleviate the pain may provide the pain relief you have been longing and waiting for.

2. Obesity

It is becoming more and more usual to see obese individuals. Unhealthy lifestyles including getting a lack of exercise and consuming ultra-processed fat-filled sugary foods and certain medications can lead to certain illnesses causing an excessive increase in weight gain such as Cushing's and hypothyroidism leading to excessive weight gain. According to the World Health Organization, in 2022 one in eight people world-wide were obese negatively impacting children, adolescents, and adults (World Health Organization, 2024). In a systematic review, it was found that individuals with obesity and excess weight, but not overweight, increased pain was reported more than individuals with normal weight (Garcia, 2024). The types of pains reported were back aches, joint and foot pain. Risk factors for chronic pain development related to the regular use of analgesics and taking stronger pain meds such as opioids were in relation to those individuals who had greater fat mass and less lean mass (Okifuji, 2015).

3. Diet

Consuming great tasting foods can be one of the most gratifying and satisfying events of the day. Food brings

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many closer together through celebratory engagements and can also serve as an enjoyable conversation piece. It brings comfort, cultural exchange, and nostalgia. Sharing these wonderful experiences through food, it is wise for one to be aware of the various types. With the ever-rising costs of food, it is becoming harder to afford a healthy diet. When grocery shopping, the less- healthier foods are more affordable than the more densely nutritious food items. A variety of foods known as inflammatory foods causes one to develop inflammation in the body signaling something is wrong. A little inflammation is not a terrible thing because it helps to ward off infections. However, when inflammation is continuous, it can erupt into a chronic condition such as arthritis and other chronic diseases. Inflammatory foods include refined carbohydrates such as white breads and pastries, French fries, fried foods, sodas, and other sugary laden beverages, red meats and processed meats, margarine, shortening and lard (Harvard Publishing, 2024). These foods are also linked to obesity, metabolic syndrome, and diabetes.

4. Medications and their Side Effects

There have been countless times where medication advertisements have discussed their side effects. Some side effects may even be fatal. Yet and still, the Food and Drug Administration allows for the medications to be placed on the market for prescribing purposes and human consumption. It seems if medications are to be taken, they should not cause one to feel worse than what they did prior to taking the medication.

The unfortunate risk that comes with taking medications is the cause of skeletal muscle toxicity. The muscle toxicities may manifest as myopathies, myalgias, myositis, rhabdomyolosis and hyperCKemia. These myotoxic drugs are known as statins, D-Penicillamine, Zidovudine, Colchicine, Hydroxychloroquine, Emetine, and Corticosteroids. Other medications that may cause pain are known as Fluoroquinolones.

4.1 Statins

Statins are prescribed to treat hyperlipidemia. Hyperlipidemia is also known as high cholesterol. Due to the uncomfortable pain related side effects patients have while taking this medication, compliance is slim. Stain associated muscle symptoms ranging from mild to moderate muscle pain, weakness, or fatigue to potentially life threatening rhabdomyolosis are reported by 10 to 25 percent of patients receiving the statin therapy (Pierandred, 2021).

4.2 Colchicine

Colchicine is prescribed to treat an inflammatory condition known as gout, a form of arthritis. Myotoxicity development of this drug is dependent upon the prescription dosage. It usually takes months or years for the myotoxic symptoms to occur. If used in conjunction with Simvastatin, the onset of muscle pain may occur more rapidly and sever resulting in rhabdomyolosis (Fernandez, 2019).

4.3 D-Penicillamine

D-Penicillamine is used to treat rheumatoid arthritis. Although the production of myopathy occurrences is rare with this drug, it may still happen. Patients complain of shoulder pain when taking this drug. One of the key findings while taking this medication demonstrating muscle impairment is necrosis of muscle fibers and infiltration of myofibers with inflammatory cells (Janssen, 2020).

4.4 Zidovudine

Zidovudine is prescribed to treat HIV. There is an association of the development of myopathy while taking this drug. Myopathy will occur within six to twelve months after initial start regardless of dosing. Pain reported by patients occurs in the thighs and calves with myalgias and muscle wasting. The patient may also have twice as much or more of the normal elevated CK serum levels in blood results (Janssen, 2020).

4.5 Corticosteroids & Smoking

Taking steroids and smoking may cause osteoporosis. Osteoporosis has been linked to pain. The thinning of bones increases a person's chances for fractures. This disease causes pain in bones and muscles particularly in the back (Fields, 2023). Participating in these types of activities may render a bone density test to be performed. If it is found the person has a decrease in bone density, weight bearing exercises, calcium supplements, Fosamax, and Vitamin D supplements may prove beneficial.

4.6 Hydroxychloroquine

Hydroxychloroquine is an antimalarial drug. It is also prescribed to treat rheumatoid arthritis, scleroderma, lupus and autoimmune diseases. Although utilized to treat several different diseases, unfortunately one of the adverse effects that comes with the medication is myopathy. Lab results will show elevated serum CK levels, elevated lysosomal pH, and enzyme inhibition (Janssen, 2020). Perhaps the best way to prove antimalarial myopathy is by performing a muscle tissue examination.

4.7 Emetine

Emetine is prescribed for the treatment of diarrhea and the induction of vomiting. If this medication is taken in excess myofibrillar myopathy can develop. Myopathy will present complaints of muscle pain, muscle stiffness and tenderness.

4.8 Fluoroquinolones

Levaquin is prescribed to treat infections, inflammations, and anthrax. This medication is classified as an antibiotic in the fluoroquinolones class. It is important to note that while taking this drug, tendinitis or tendon rupture may occur. Areas impacted may be hands, back of ankles, shoulders or other parts of the body. The risk of this occurrence is in individuals over the age of 60. Taking Levofloxacin may exacerbate muscle weakness in those people with myasthenia gravis-a disorder that causes muscle weakness (Medline Plus, 2019). Ciprofloxacin is also an antibiotic in this class. Ciprofloxacin may cause problems with bones, joints, and tissues around joints in children (Medline Plus, 2021). A side effect of Cipro may also be sudden back pain.

5. Dehydration

Adequate water consumption is an integral part of life. Inadequate hydration can lead to muscle spasms, cramps, and joint pain. Dehydration causes fluids to be pulled away from tissues causing body aches, pain, and headache. Older adults and people with medical conditions such as diabetes and kidney disease can cause increased sweating and urination resulting in fluid loss. Individuals prescribed diuretics are also candidates for potential dehydration (Krany, 2024).

6. Alcohol Use

Drinking alcohol does not hydrate regardless of what one believes. If consuming alcohol, make sure to drink water when consuming. Alcohol may lead to inflammation when used in excess. If pain issues are already there, exacerbations will occur in illnesses such as rheumatoid arthritis. According to a 2019 study, alcohol can stifle the immune system aiding in the decrease of the inflammatory response leading to pain, including joint pain (Krany, 2019).

7. Thyroid Disease

Impairments of the thyroid gland resulting in hypothyroidism can significantly impact the musculoskeletal system negatively. When left untreated, the result may cause muscle impairment to evolve. Hypothyroid myopathy may manifest as myalgia, myopathy, proximal myopathy, muscle pseudohypertrophy, rhabdomyolosis, myoedema, and acute compartment syndrome (Fariduaddinm 2023).

8. Vitamin D Deficiency

Having a deficiency in Vitamin D causes the inability to absorb calcium and phosphorus. This condition leads to an increased risk of bone pain, bone fractures, muscle pain and weakness. Vitamin D deficiency has also been associated with headache, abdominal, knee and back pain, and persistent musculosketal pain and costochiondritic chest pain (Shipton, 2015).

9. Pain Management

There are many reasons why an individual may be experiencing pain. The most obvious reasons such as injuries are not always the reasons for experiencing unfortunate discomfort. There are indeed other reasons-reasons that are not always discussed with the patient by the healthcare provider. Being an advocate for yourself can help to prevent or alleviate having to endure this situation. If you find you have been unable to identify the cause of your pain, please consider utilizing the following tips the next time you see your health care provider:

10. Tips

Be vocal about any complaints as they relate to pain. If not adequately hydrated and if able to consume more water or hydrating beverages throughout the day, then do so. Remember alcohol will cause dehydration. Drink water after its consumption.

If taking prescribed medications, read up on them. Explore the side effects. If you feel pain is being caused by the medication, discuss the medications taken and the side effects with your provider. Ask for the dosage to be reduced or changed to another medication to help with the issue you are having.

Ask for blood work to be drawn to check thyroid, bone density, and Vitamin D levels. If there are deficiencies found, take medications prescribed for treatment accordingly. Modify your diet to one of a healthier one excluding inflammatory food. Choose foods that are anti-inflammatory such as tomatoes, green leafy vegetables, nuts, tuna, and salmon. Reduce your weight by exercising and being mindful to eliminate sugary and starchy food items. Incorporating weight bearing exercises may also build strength and muscle. If your body weight is undesirable and you would benefit from shedding a few pounds, pain may be absent, less existent or eradicated completely. The ultimate goal is to be in the know about how what you are putting into your body, how it may negatively

impact your mobility and life performances, and what to do about it if it occurs.

11. Conclusion

In conclusion, there are many different types of sources of pain. When aches and pains begin to generate that are new onset, it is very important to find out the potential sources of the pain. The sources can range from medications, diet, alcoholism, smoking, endocrine disorders, dehydration and obesity to deficiencies in nutrients much needed in the body. It is important to seek out health care professionals and gain health literacy independently about the various sources of pain and methods of management. Having knowledge and applying it will aid in the promotion of better comfort measures and the identification of the pain source (s).

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