

COVID-19 and Osteoarthritis Disability: Possible Interactions and Selected Preventive Strategies

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ABSTRACT

Older adults suffering from chronically painful disabling osteoarthritis of one or more joints, may also be more susceptible than healthy age and gender matched adults to infections such as COVID-19 as a result of their debilitated state and oftentimes multiple health conditions. This mini review briefly discusses this topic and offers some possible preventive directives for reducing osteoarthritis suffering and possible COVID-19 risk.

Keywords: Coronavirus; COVID-19; Disability; Infection; Osteoarthritis; Pain; Prevention

DESCRIPTION

Strong evidence shows older adults, especially those suffering from one or more pre existing chronic health condition, such as osteoarthritis, are more likely than not to be at increased risk for being infected by the novel coronavirus known as COVID-19 that can prove fatal [1]. In addition, those adults suffering from osteoarthritis and who are now under lockdown may possibly also be at heightened risk for COVID-19 [2], or may be experiencing increasing symptoms of this widespread painful joint disease disabler, even if they are not infected by COVID-19.

Indeed, not only are those adults who already have chronically painful disabling osteoarthritis of one or more joints, especially susceptible to COVID-19 because they often have one or more co existing chronic health conditions such as diabetes, heart disease, and asthma [3], but may currently be weaker than usual, as well as overwhelmed by the demands of their condition if supportive health services have been considerably reduced or eliminated, even if they were previously functional and active. There may also be additionally challenged in managing their joint disease, as a result having potential problems with activities of daily living, and the need to adopt relatively novel activities such as having don masks and gloves, retrieve food or medicines or both from the exterior, while not being able to lift, bend, or carry, clean packages, and open them. They may be in more pain than usual due to excess fears of contracting COVID-19, related sedentary behaviors, and possible weight gain, among other health limiting issues.

In addition, surgery as a tertiary remedy for those with severe osteoarthritis pain, while somewhat successful, now poses further added risks of intrinsic as well as acquired infections, and further debility, as well as delays, due to its oftentimes elective nature. Returning home from the hospital is also likely to be more challenging than in pre pandemic times [4]

In particular, although physical activity is highly promoted for health maintenance among older adults, regardless of disease status, this may be especially challenging to undertake in absence of their regular supervision in gyms, swimming pools, rehab centers, or sports clubs, and uncertainty about exercising alone in a confined space. Moreover, they may be unfamiliar with technologies that might be helpful, or unable to access these readily, for example if they have limited hand dexterity, or vision, or because they are unable to cover the costs of internet access.

In regards to accessing those basic commodities needed to ensure health and safety, they may well encounter additional constraints as a result of being unable to 'get up' at 6 am or 7 am for purposes of 'safe' shopping if they are stiff and sore from their arthritis, nor able to stand in line ups for basic necessities, or manipulate packages at self-serve payment outlets. Moreover, many may be dependent on ambulatory devices that may evoke displeasure by the 'public' within the confines of a store for example, if these are viewed as sources of infection or have impacts on distancing rules. Public transport, and transport for older disabled persons is also potentially risky even if available.

In light of the immense burden placed currently on older adults, as well as some of the challenges noted above that pertain to

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many individuals currently suffering from chronic disabling osteoarthritis, we feel that while much is being correctly devoted to combating COVID-19, those community dwelling freely living individuals who may be especially vulnerable in this regard, as well as those at risk for or suffering from mild-severe osteoarthritis symptoms should have all the resources and support necessary put in place to maximize their health. This is not only humane and ethical practice in this author’s view, but has far-reaching public health ramifications, as chronic osteoarthritis affects the majority of the elderly population, and those who are most vulnerable to the virus are those with the more severe forms, and multiple co existing health conditions found to parallel this disease, especially those that are poorly managed.

In agreement with Kim and Su’s [5] bio psychosocial model approach to addressing issues such as those highlighted above, and others who recommend multiple self-management practices and others [2, 6-10], we would like to offer an additional few thoughts in this regard in efforts to avert the suffering and excess debility older community dwelling adults with osteoarthritis are likely to be encountering during the pandemic, and possibly beyond this. These strategies encompass efforts to foster.

- Healthy nutrition practices
- Pain control
- Social support and the provision of the delivery of the following strategies by providers as well as strategies for self-management as follows (Tables 1 and 2).

Strategies to counter excess COVID-19 and osteoarthritis disability risk

Advice and understandable, accessible and practical educational tools

Periodic telephone/online discussions/check-ins

Emails as indicated

Encouragement, empathy, and careful listening

Healthy meal delivery

Protocol guidelines for reducing risky behaviors and excess pain

Information and resources as indicated to reduce barriers to protective behaviors

Communications that reinforce favorable self-efficacy beliefs and expectations

Information on the importance of maintaining a healthy weight and diet

Ideas that can minimize environmental risk factors

Ideas that help to allay fears and promote sleep health

Appropriate information on the use of vitamin D and other supplements

Table 1: Home based strategies providers can foster to counter excess COVID-19 and osteoarthritis disability risk.

Home based strategies for community dwelling adults
Educated decisions about healthy/versus unhealthy choices
Meditation related practices
Guided imagery
Self-education
Mild to moderate exercise participation
Controlled breathing practices
Sound nutritional practices
Recommended supplements
Gardening or outdoor exposure as permitted
Use of appropriate assistive devices
Joining a support group
Practicing social distancing, hand washing
Helping to minimize environmental risk factors
Adopting optimal sleep routines

Table 2: Home based strategies community dwelling adults can safely attempt to reduce their symptoms and infection risk.

To this end, data imply that a concerted effort implemented now, rather than later on by both practitioners as well as their older vulnerable clients as outlined above may greatly foster overall their wellbeing during periods of isolation, as well impacting COVID-19 illness risk favorably, regardless of vaccine availability. The use of health promoting tactics rather than fear based messages by providers is especially indicated in this regard and should also be forthcoming.

CONCLUSION

The magnitude of potentially preventable suffering among the elderly in the context of COVID-19 is clearly immense and is compounded in the presence of poor health, including the disease known as osteoarthritis. In turn, the osteoarthritic disease process is likely to be worsened directly as well as indirectly by the COVID-19 pandemic in multiple ways.

To avert a major health catastrophe, and until some curative remedy emerges, in one or both cases discussed here, carefully construed dietary, nutritional, lifestyle, and socially supportive approaches as enumerated in Boxes 1 and 2 may be more helpful than not in efforts to limit the immense consequences

for society at the individual and economic and social levels of the current pandemic situation.

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