



Mental Health and Sarcoidosis

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Introduction

Sarcoidosis is an immunological disease characterized by non-caseating granulomas involving multiple organ systems, commonly the lungs, skin, eyes, and heart. Neurologic manifestations are seen in 5% of patients and is attributed to granulomatous inflammation in the CNS.⁵ Sarcoidosis is believed to have some genetic component as increased rates of disease are seen in family clusters (five times more likely in the sibling of patient), racial groups (three times more likely in African Americans), and specific HLA subtypes.⁷

Case Report

Patient is a 15-year-old Caucasian female with history significant for anemia presented to clinic for possible anxiety and depression. The patient states that she has been feeling “off” over the past year and that it has been gradually worsening. She attributes these mood changes to feeling like she has not adjusted to starting high school as well as her peers. She complains of feeling low on energy, losing interest in activities she was previously passionate about, changes in sleep and appetite and frequently feeling like a burden on her family. She also complains of new onset episodes of feeling excessively anxious around 3 times per week but denies symptoms related to panic attacks.

The patient has a maternal family history of sarcoidosis, anxiety, and depression. Two of her family members have officially been diagnosed with sarcoidosis, her maternal great grandmother in her early 60s as well as her maternal aunt in her 40s. Family reports that few other family members may also have sarcoidosis but have not been officially diagnosed. The family members who have been diagnosed with depression and anxiety are exclusively female, reportedly have symptom onset at a younger age, and have struggled with it throughout their lives. The family members who have been diagnosed with sarcoidosis also reportedly have more severe cases of anxiety and depression in comparison to other family members who have not displayed any sarcoid related symptoms.

Discussion and Future Direction

Sarcoidosis affects multiple organ systems lending to various somatic complaints, with fatigue ranking the most common.⁸ Yet, the significant predictors of fatigue are cognitive dysfunction and depressive symptoms. Compared to the general population, those with sarcoidosis have significantly more anxiety and depression with the largest impact affecting the younger age groups. Dyspnea, SES, comorbidities, and quantity of organ systems affected contributes to the development of anxiety and depression.⁴ Of the comorbidities, psychiatric complaints for anxiety and depression are roughly 65%.²

One Netherland study found a 4% prevalence of anxiety/depression in asymptomatic sarcoidosis patients and a 30% prevalence in symptomatic patients. Although this percentage is lower than other studies who report 60% - 66% prevalence, these values are substantially high considering the study eliminated those with significant comorbidities.⁶

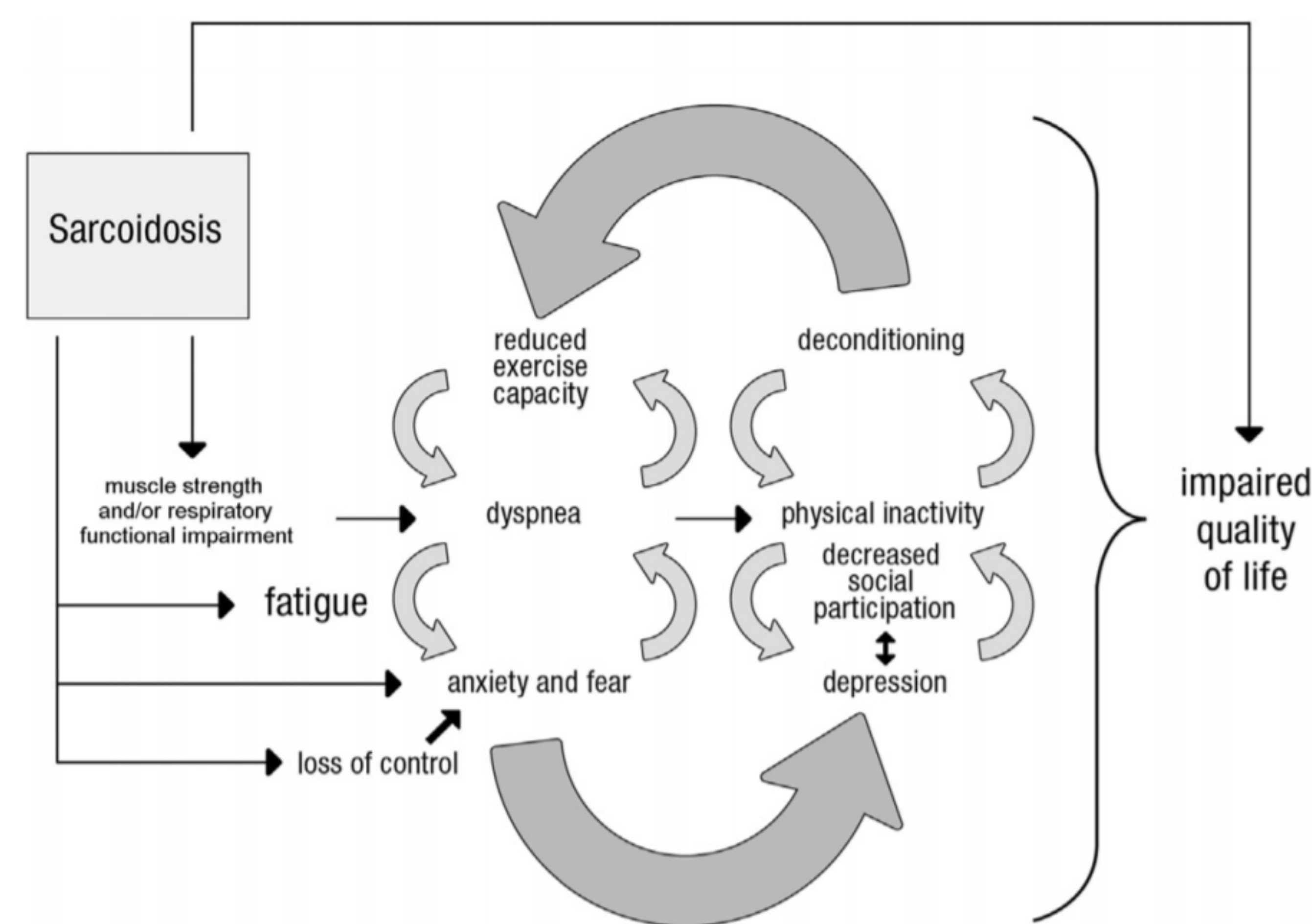


Fig. 1. Negative vicious circle of physical deconditioning: disabling symptoms in sarcoidosis can reduce daily physical activities, resulting in general deconditioning and a reduced quality of life. (Adapted from Swigris JJ, Brown KK, Make BJ, et al. Pulmonary rehabilitation in idiopathic pulmonary fibrosis: a call for continued investigation. *Respir Med* 2008;102(12):1675-80, and Marcellis RG, Lenssen AF, de Vries J, et al. Reduced muscle strength, exercise intolerance and disabling symptoms in sarcoidosis. *Curr Opin Pulm Med* 2013;19(5):528.)

Drent M, Strookappe B, Hoitsma E, Vries JD. *Consequences of Sarcoidosis*. Clinics in Chest Medicine. 2015;36(4):727-737. doi:10.1016/j.ccm.2015.08.013.

Literature cites approximately 450 cases of familial sarcoidosis with evidence of potential genetic factors. Familial sarcoidosis is more prevalent in mother-child relations.¹ While the cause of sarcoidosis is unknown, those with the inflammatory condition had significant psychosocial stress prior to their diagnosis.^{6,9} This is a logical assumption considering stress alters the immune system and inflammatory response significantly impacting many diseases.

A study done by Yamada et al. found psychosocial stress and lack of sleep were prominent in patients one year prior to their diagnosis.⁹ Although this study was limited to 55 newly diagnosed subjects, there is literature providing expansive details of patients' symptoms the years prior to diagnosis.

Is it possible for anxiety/depression, whether it be from psychosocial stressors or inflammatory effects, to be present in a large population of sarcoidosis patients prior to their diagnosis? Typically patients suffer on average 5 years before getting diagnosed, prolonging their suffering and lowering their quality of life.⁴ Is it valid to screen patients presenting with anxiety or depression and who have a family history for Sarcoidosis?

References

1. Elford J, Fitch P, Kaminski E, McGavina C, Wells P. *Five cases of sarcoidosis in one family: a new immunological link?* *BMJ*: Thorax, 2000; 55(4): 343-344. doi:10.1136/thorax.55.4.343
2. Goracci A, Fagioli A, Martinucci M, Calossi S, Rossi S, Santomauro T, Mazzi A, Penza F, Fossi A, Bargagli E, Pieroni MG, Rottoli P, Castrogiovanni P. *Quality of life, anxiety and depression in Sarcoidosis*. *General Hospital Psychiatry*, 2008. 30: 441-445. doi:10.1016/j.genhosppsych.2008.04.010
3. Hendriks C, Drent M, Kleijn WD, Elferich M, Wijnen P, Vries JD. *Everyday cognitive failure and depressive symptoms predict fatigue in sarcoidosis: A prospective follow-up study*. *Respiratory Medicine*. 2018; 138: 24-30. doi:10.1016/j.rmed.2017.11.008
4. Hinz A, Brähler E, Möde R, Wirtz H, Bosse-Henck, A. *Anxiety and depression in Sarcoidosis: the influence of age, gender, affected organs, concomitant diseases and dyspnea*. *Sarcoidosis, vasculitis, and diffuse lung diseases: official journal of WASOG*. 2012; 29(2): 139-46.
5. Iannuzzi M. *Genetics of Sarcoidosis*. *Seminars in Respiratory and Critical Care Medicine*. 2007;28(1):015-021. doi:10.1055/s-2007-970330.
6. Rand CS, Chang B, Steimel J, et al. *Depression in Sarcoidosis*. *American Journal of Respiratory and Critical Care Medicine*. 2001; 162(2). doi:10.1164/ajrccm.163.2.2004177
7. Rao DA, Dellaripa PF. *Extrapulmonary Manifestations of Sarcoidosis*. *Rheumatic Disease Clinics of North America*. 2013;39(2):277-297. doi:10.1016/j.rdc.2013.02.007
8. Wirnsberger R, Wouters E.F.M., de Vries J. *Clinical presentation of sarcoidosis in the Netherlands: An epidemiological study*. *The Netherlands Journal of Medicine*. 1998; 53 (2): 53-60. doi:10.1016/s0300-2977(98)00058-8.
9. Yamada Y, Tatsumi K, Yamaguchi T, Tanabe N, Takiguchi Y, Kuriyama T, Mikami R. *Influence of stressful life events on the onset of sarcoidosis*. *Respirology*. 2003; 8: 186-191. doi:10.1046/j.1440-1843.2003.00456