



(CASE REPORT)



Awareness of pulmonary sarcoidosis in the older adult: A case study approach

Andrea Jennings Dr.PH., RN *

VA Northeast Ohio Healthcare System, Gerontology Research Education Clinical Center (GRECC) 10701, East Boulevard Cleveland, Ohio 44106 United States.

World Journal of Advanced Research and Reviews, 2021, 11(01), 212–214

Publication history: Received on 24 June 2021; revised on 25 July 2021; accepted on 27 July 2021

Article DOI: <https://doi.org/10.30574/wjarr.2021.11.1.0346>

Abstract

The purpose of this case study is to highlight sarcoidosis as a disease with complexities and one that requires a multidisciplinary team approach. A case study profiling an older adult who has been diagnosed with pulmonary sarcoidosis is discussed. Providing education about sarcoidosis is key for all patients. Nurses play an important role in educating patients with sarcoidosis in both inpatient and outpatient healthcare settings. Education, self-advocacy, and family support are all vital in the management of sarcoidosis.

Keywords: Sarcoidosis; Nurse; Case study; Older adult; Education

1. Introduction

Sarcoidosis is considered a rare disease and unfortunately there is no cure [1]. With sarcoidosis, the immune system over reacts and causes inflamed immune cells to form granulomas that can attach themselves to a variety of organs [1]. Sarcoidosis is classified as an autoimmune disease and is more prevalent in African Americans compared to Caucasians [1, 2]. In the US, sarcoidosis is more prevalent in women versus men [2]. The literature reports that the age range for contracting sarcoidosis varies based on gender and race [2, 3]. The exact cause of sarcoidosis is unknown but it is thought that genetics, bacteria, viruses, infections, and environmental factors may play a role in the autoimmune response in the disease [2, 3]. Pulmonary sarcoidosis is the most common type of sarcoidosis, however, the disease can attack any organ in the body [1, 2]. Sarcoidosis at times is hard to diagnosis or to detect because the symptoms may mimic other diseases [4]. Thus, health care providers may not recognize sarcoidosis and implement a treatment plan that addresses another disease or condition that plagues the older adult. Nurses working in a variety of outpatient or inpatient settings may benefit from learning more about sarcoidosis so that they can serve patients in a more effective manner. The following hypothetical case study highlights how pulmonary sarcoidosis can present in an older adult and how nurses can educate such a patient about the disease.

2. Case Study

Mrs. Brown is a 65 year old married African American woman who presented in the emergency department with a high fever, fatigue, chills, decreased urine output, dehydration, and body aches. Mrs. Brown stated that she had been ill for two weeks and her symptoms worsened over time. Lab values indicated that she had some type of infection. Mrs. Brown told the health care providers that she had a urinary tract infection (UTI) but did not seek treatment for it. To rule out other conditions or diseases, a chest ex-ray was ordered and it revealed that Mrs. Brown had granulomas on her lungs. Mrs. Brown denies the classic symptoms (i.e., shortness of breath, wheezing, dry cough, and chest pain) of pulmonary sarcoidosis [5]. The physicians suspected sarcoidosis after viewing the results of the chest ex-ray. The results from a

* Corresponding author: Andrea Jennings Email: andrea.jennings2@va.gov

VA Northeast Ohio Healthcare System, Gerontology Research Education Clinical Center (GRECC) 10701, East Boulevard Cleveland, Ohio 44106 United States.

bronchoscopy confirmed the diagnosis of pulmonary sarcoidosis. In this case study, Mrs. Brown presented with symptoms of an UTI but was given a surprise diagnosis of sarcoidosis. After a course of antibiotics, Mrs. Brown's UTI was treated effectively. Mrs. Brown stated that she never knew she had sarcoidosis and she was not knowledgeable about the disease. Mrs. Brown mentioned to the physician that she suffers from vertigo periodically and inquired if this condition was related to her sarcoidosis. Mrs. Brown's pulmonary sarcoidosis is thought to be dormant at this time and it is unclear if other organs have been impacted by the disease. After a weeklong stay in the hospital, Mrs. Brown was discharged and has a follow-up appointment with the nurse at the sarcoidosis clinic. The nurse is preparing for her session with Mrs. Brown to educate her about the new diagnosis of pulmonary sarcoidosis.

3. Discussion

Mrs. Brown seems to fit the profile of someone with sarcoidosis given her ethnic background. The nurse utilized the Foundation of Sarcoidosis Research (FSR) to gather educational materials about sarcoidosis. FSR is a resource for both patients and caregivers who may have clinical, research, advocacy, and insurance related questions or concerns about sarcoidosis. The nurse encourages Mrs. Brown and her husband to become familiar with the FSR website and the resources that are offered. The American Lung Association is another resource that Mrs. Brown could activate for information regarding pulmonary sarcoidosis.

The nurse highlights the following conditions for Mrs. Brown as they could possibly manifest from her having pulmonary sarcoidosis: 1) Pulmonary Fibrosis: Scarring of the lung tissue resulting from granuloma accumulation. 2) Bronchiectasis: Thickening of the airways of the bronchi walls due to granuloma formation resulting in inflamed airways [5]. It is important to note that Mrs. Brown did not present with symptoms of pulmonary sarcoidosis and it is assumed that the disease is dormant. Research indicates that granulomas on the lungs can disappear naturally over a period of time or they can progress and cause severe fibrosis in the lungs [5, 6].

At this time, Mrs. Brown is encouraged to practice healthy habits by eating a healthy diet, exercising on a regular basis, and avoiding exposure to smoke and chemicals. Due to her sarcoidosis, Mrs. Brown is advised to ask her physician what routine radiology scans, pulmonary function tests, eye examinations, clinical testing or procedures are needed to monitor her sarcoidosis. Managing or monitoring sarcoidosis is truly a multidisciplinary team approach. The nurse emphasizes to Mrs. Brown that corticosteroids are the initial line of treatment for pulmonary sarcoidosis if there is a flare-up [5, 7].

The nurse tells Mrs. Brown that other organs can be affected by sarcoidosis and there are symptoms associated with each. The following organs and systems may be impacted by sarcoidosis: skin, lymph node involvement, eye, musculoskeletal system, vestibular system, neurological system, heart, liver, renal system, and the brain [8]. Knowing the basic symptoms that are associated with each impacted organ and system is essential for Mrs. Brown to know as she monitors her sarcoidosis over time. Table 1 illustrates organ/system involvement and the associated symptoms [8].

Mrs. Brown did mention having vertigo and wanted to know if there is a connection to sarcoidosis. A physician referral was given to Mrs. Brown to make an appointment to see a vestibular specialist who specializes in vertigo. This physician will do a series of vestibular testing to determine the cause of the vertigo and to determine if there is a linkage to sarcoidosis.

Table 1 Symptoms of Sarcoidosis by Organ/System

Organ/System	Sarcoidosis Symptoms
Lung	Dry cough, wheezing, shortness of breath, and chest pain.
Skin	Nodules, papules, rashes, and sores.
Eye	Pain, sensitive to light, burning, and itching.
Musculoskeletal System	Osteoporosis, swollen joints, and pain in joints.
Vestibular System	Vertigo and dizziness.
Neurological System	Meningeal inflammation, numbness/tingling in extremities, and impaired nerves.

Heart	Irregular heartbeat, syncope, and heart failure.
Liver	Elevated liver enzymes, abdominal pain, and jaundice.
Renal	Kidney stones.
Brain	Headaches, eye pain, and seizures.
Lymph Node Source: Séve P, Pacheco Y, Durupt F, Jamilloux Y, Gerfaud-Valentin M, Isaac S, Boussel L, Calender A, Androdias G, Valeyre DV, Jammal, TE. Sarcoidosis: A clinical overview from symptoms to diagnosis. <i>Cells</i> . 2021; 10 (4):766.	Swollen glands: neck, chin, arm pit, and groin.

4. Conclusion

In summary, pulmonary sarcoidosis was a surprise diagnosis for this older adult in this case study who presented in the emergency department. This can be an overwhelming experience for the older adult given that sarcoidosis can mimic other diseases, therefore causing a host of diagnostic testing to occur. If a diagnosis of sarcoidosis is confirmed, continuing patient education, self-advocacy, and family support are all essential. A multidisciplinary team of providers are often needed to address the array of complications that can occur as a result of sarcoidosis. Patients must become aware of the providers who are specializing in sarcoidosis in their communities in order to get the best treatment based on evidence. Nurses play a key role in educating the patient initially and throughout the care regimen. Whether sarcoidosis is dormant or active, self-monitoring is needed on an ongoing basis for a lifetime. This case study will benefit society by educating nurses about pulmonary sarcoidosis and in return allowing patients to hopefully manage this condition more effectively.

Compliance with ethical standards

Statement of informed consent

No statement of informed consent. This is a hypothetical case study.

References

- [1] Grunewald J, Grutters JC, Arkema EV, Saketkoo LA, Moller DR, Muller-Querheim J. Sarcoidosis. *National Reviews Disease Primers*. 4 July 2019; 5(1): 45.
- [2] Culver DA, Judson MA. New advances in the management of pulmonary sarcoidosis. *BMJ*. 2019; 367: 15553.
- [3] Jain R, Yadav D, Puranik N, Guleria R, Jin J-O. Sarcoidosis: Causes, diagnosis, clinical features, and treatments. *Journal of Clinical Medicine*. 2020; 9(4): 1081.
- [4] Jeny F, Bouvry D, Freynet O, Soussan M, Brauner M, Planes C, Nunes H, Valeyre D. Management of sarcoidosis in clinical practice. *Europe Respiratory Review*. June 2016; 25(14): 141-50.
- [5] Johns Hopkins Medicine [Internet]. Baltimore: The Johns Hopkins University, The Johns Hopkins Medical Hospital, Johns Hopkins Health System; ©2021 [cited 2021 July 1]. Available from: <https://www.hopkinsmedicine.org/health/conditions-and-diseases/pulmonary-sarcoidosis>.
- [6] Lopes MC, Amadeu TP, Ribeiro-Alves M, Henrique da Costa C, Silva BRA, Rodrigues LS et al. Defining prognosis in sarcoidosis. *Medicine*. 25 Nov 2020; 99(48): e23100.
- [7] Cozier YC, Berman JS, Palmer JR, Boggs DA, Serlin DM, Rosenberg L. Sarcoidosis in black women in the United States: data from the Black Women's Health Study. *Chest*. 2011; 139: 144-50.
- [8] Séve P, Pacheco Y, Durupt F, Jamilloux Y, Gerfaud-Valentin M, Isaac S, Boussel L, Calender A, Androdias G, Valeyre DV, Jammal, TE. Sarcoidosis: A clinical overview from symptoms to diagnosis. *Cells*. 2021; 10(4): 766.