REVIEW ARTICLE ON PULMONARY SARCOIDOSIS

Dr. V.Hemavathy M.SC (N), M.A, M.Phil. ,Ph.D. 1, Dean com principal Sree Balaji College Of Nursing

Dr. S.Semmlar M.SC (N), Ph.D. 2, HOD Of the Medical Surgical Nursing

G.M Anu Radhaa M.SC (N) 1ST YEAR . 3, Author

ABSTRACT:

Sarcoidosis, a granulomatous disorder of unknown etiology, characteristically involves multiple organs. However, pulmonary manifestations typically dominate. Chest radiographs are abnormal in 85 to 95% of patients. Abnormalities in pulmonary function tests are common and may be associated with cough, dyspnea, and exercise limitation. However, one third or more of patients are asymptomatic, with incidental abnormalities on chest radiographs. The clinical course and expression of pulmonary sarcoidosis are variable. Spontaneous remissions occur in nearly two thirds of patients. The course is chronic in up to 30% of patients. Chronic pulmonary sarcoidosis may result in progressive (sometimes life-threatening) loss of lung function. Fatalities ascribed to sarcoidosis occur in 1 to 4% of patients. Although the impact of treatment is controversial, corticosteroids may be highly effective in some patients. Immunosuppressive, cytotoxic, or Immunomodulatory agents are reserved for adverse effects from corticosteroids. Lung transplantation is a viable option for patients with life-threatening failing medical therapy

KEY WORDS: pulmonary sarcoidosis, lung, multiple organs, chest radiography, cough, dyspnea, exercise limitation, asymptomatic, abnormalities, immunosuppressive, cytotoxic, immumodulatoru, corticosteroids, lung transplantation, medical therapy.

INTRODUCTION:

Sarcoidosis is a condition that causes tiny collections of immune system cells in any part of the body. These tiny collections form red, swollen lumps called granulomas. Granulomas most commonly occur in the lungs and the lymph nodes of the chest. They also can occur in the eyes, skin, heart and other organs.

Experts don't know the exact cause of sarcoidosis, but it's likely a mix of genetic and environmental factors. Some people appear to have gene changes that make them more likely to develop sarcoidosis. The condition may then be triggered by bacteria, viruses, dust or chemicals. Their immune system overreacts to the trigger, causing inflammation that forms granulomas.

There is no cure for sarcoidosis, but most people do not need treatment. Sarcoidosis may go away on its own. Other people need treatment to lessen their body's immune system response. Sometimes sarcoidosis can last for years and may cause organ damage

CAUSES:

The cause of sarcoidosis is not known. Experts think it results from a mix of genetic and environmental factors that cause the body's immune system to overreact to a substance it doesn't know.

Some people have gene changes that make their immune system more likely to overreact to triggers. Triggers could be bacteria, viruses, chemicals or dust This causes immune cells to group into tiny collections of inflamed lumps called granulomas. As granulomas build up in an organ, the function of that organ can be affected.

SYMPTOMS:

Symptoms of sarcoidosis vary, depending on which organs are affected and how badly they're affected. Sarcoidosis sometimes develops slowly over time and causes symptoms that last for years. Other times, symptoms appear suddenly and then disappear just as quickly. Many people with sarcoidosis have no symptoms, so the condition is found only when a chest X-ray is done for another reason.

LUNG SYMPTOMS:

Sarcoidosis most often affects the lungs and may cause lung problems, such as:

- Ongoing dry cough.
- Shortness of breath.
- A squeaking sound when breathing out, called wheezing.
- Chest pain.

OTHER SYMPTOMS:

Other symptoms are usually linked with the organs affected. Sarcoidosis can cause granulomas in any part of the body, such as the liver, spleen, muscles, bones and joints, kidneys, and lymph nodes.

RISK FACTORS:

- While anyone can develop sarcoidosis, factors that may raise your risk include:
- Age and sex. Sarcoidosis can happen at any age, but often occurs between the ages of 20 and 60 years. Women are slightly more likely to develop the condition than are men.
- Race. Sarcoidosis occurs more often in people of African descent and those of Northern European descent. African Americans are more likely to have sarcoidosis in other organs along with the lungs.
- Job or hobbies. Working around chemicals and dust. can raise your risk.
- Family history. If someone in your family has had sarcoidosis, you're more likely to get the condition.

COMPLICATIONS:

Sometimes sarcoidosis causes long-term problems.

LUNGS:

Pulmonary sarcoidosis that isri't treated can lead to scarring in the lungs that lasts forever. This scarring is called pulmonary fibrosis. Pulmonary fibrosis makes it hard to breathe and sometimes causes pulmonary hypertension.

DIAGNOSIS:

- Sarcoidosis can be hard to diagnose because there may not be many symptoms in the early stages. When symptoms do occur, they may be much like those of other conditions.
- Your healthcare professional does a physical exam and talks with you about your symptoms and possible risk factors. The healthcare professional also listens to your heart and lungs, checks your lymph nodes for swelling, and looks at any skin lesions.

- No tests can specifically diagnose sarcoidosis. Tests can help rule out other conditions and show what body systems may be affected by sarcoidosis. For example, you may have
- Blood and urine tests to check your overall health and how well your kidneys and liver are working.
- Chest X-ray to look at your lungs and heart.
- Computerized tomography (CT) scan of the chest to look at your lungs
- Lung function tests, also called pulmonary function tests, to measure how much air you can breathe in and out and how much oxygen your lungs send to your blood.
- Electrocardiogram (ECG or EKG) and cardiac ultrasound to check for heart problems and look at your heart's health.
- Eye exam to check for vision problems that may be caused by sarcoidosis.
- Positron emission tomography (PET) scan or magnetic resonance imaging (MRI) if sarcoidosis may be affecting your heart or central nervous system.
- Other tests may be added, if needed.

BIOPSY:

Your healthcare professional may take a small sample of tissue called a biopsy. The sample is taken from any part of your body that may be affected by sarcoidosis. The sample is used to look for the granulomas commonly seen with the condition. For example, biopsies can be taken from your skin, lungs and lymph nodes.

TREATMENT:

There's no cure for sarcoidosis, but often sarcoidosis goes away on its own. You may not need treatment if you have no symptoms or only mild symptoms. If you need treatment, the type of treatment you have depends on how severe your symptoms are and what organs are affected. Treatment can lessen the body's immune system response and inflammation.

MEDICINES:

- If your symptoms are severe or affected organs aren't working properly, you may need medicines. These can include
- Corticosteroids. These powerful medicines lessen. inflammation. They're usually the first treatment tried for sarcoidosis. The medicine can be given as pills or shots. In some cases, corticosteroids can be put directly on the affected area. Examples of these types of medicines include cream put on skin lesions or rash, medicine breathed into the lungs using an inhaler, and drops put into the eyes.
- Medicines that lower the immune system's response. Medicines such as methotrexate (Trexall) and azathioprine (Azasan, Imuran) lessen inflammation by lowering the immune system's response to a trigger.
- Hydroxychloroquine. Hydroxychloroquine (Plaquenil) may be helpful for skin lesions and high blood-calcium level

OTHER TREATMENTS:

- Depending on your symptoms or complications, you may need other treatments. For example, you may have
- Physical therapy to lessen tiredness and strengthen muscles,
- Pulmonary rehabilitation to help ease breathing and do more activities.
- Implanted cardiac pacemaker or defibrillator for heart rhythm problems.
- An organ transplant may be an option for some people if sarcoidosis has severely damaged the lungs, heart or liver.

ONGOING MONITORING:

How often you see your healthcare professional varies based on your symptoms and treatment. Seeing your healthcare professional regularly is important even if you don't need treatment.

Your healthcare professional monitors your symptoms and checks to see if you need treatment, how treatments are working and if you have complications. Ongoing monitoring may include tests based on your condition. For example, you may have regular chest X-rays, blood and urine tests, EKGs, and exams of your lungs, eyes, skin and other organs. Follow-up care is likely lifelong

LIFESTYLE AND HOME REMEDIES:

Along with your treatment, these self-care tips can help

Follow your treatment plan: Even if you start to feel better, don't stop taking your medicine without talking with your healthcare professional. Keep all follow up appointments. Let your healthcare professional know if you have new of worsening symptoms

Make healthy lifestyle choices: These can include eating a healthy diet, working toward or keeping a healthy weight, managing stress.

CONCLUSION :

Pulmonary sarcoidosis, while often manageable, can have varying outcomes, with some patients experiencing spontaneous remission and others developing chronic disease with potential for lung scarring and respiratory complications. A significant portion of patients, however, see their condition stabilize or improve with treatment, particularly in the early stages.

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