

A Case Study On Glenohumeral Arthritis

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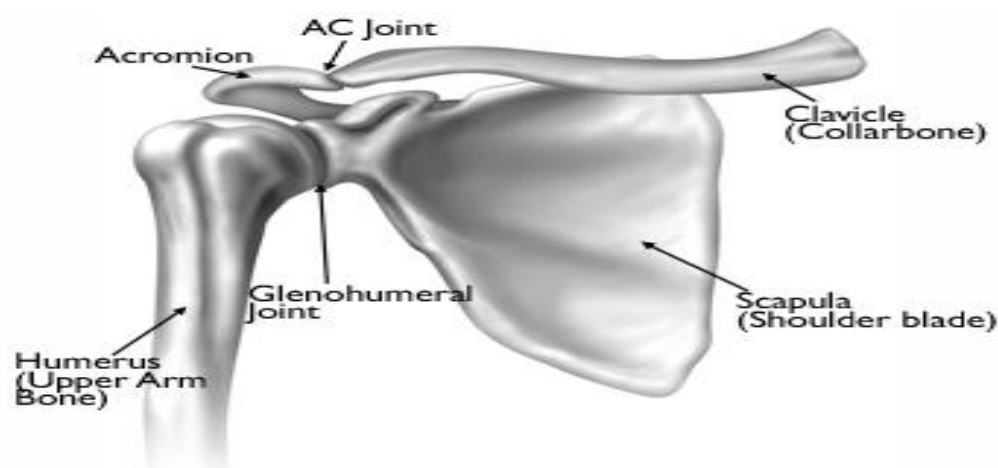
1. CASE STUDY OF MY PATIENT

Patient Mrs. X ,65 years \Female got admitted in Sree Balaji college and hospital with the complains of right shoulder pain, leg pain bone pain in all over the body. She undergone many investigations and She was diagnosed as Glenohumeral Arthritis .

2. INTRODUCTION

The structure of the shoulder joint is in the form of a ball and socket and is called glenohumeral joint. It is made up by the articulation of humerus and glenoid bones, in which the head of the humerus in the upper arm forms the ball whereas the glenoid in the shoulder blade constitutes the socket in which the head of the humerus fits. For the proper functioning of the joint, there is another set of soft tissues which comprises of muscles, tendons and ligaments that provide stability, support and mobility to the joint.

In case of glenohumeral arthritis, the cartilage present between the bones of the shoulder joint gets damaged which exposes the bones to each other, thereby encouraging friction in between the bones and leading to development of bony growth or osteophytes which hampers the movement of the shoulder with aggravated pain and swelling. This condition may even result in loss of movement in the shoulder with progression.



SIGNS AND SYMPTOMS OF GLENOHUMERAL ARTHRITIS

The Signs and symptoms that arise as a result of glenohumeral arthritis are:

BOOK PICTURE	PATIENT PICTURE
❖ Pain due to rubbing of bones in the shoulder joint.	Present
❖ Progressive increase in the pain.	Present
❖ Discomfort and difficulty in movement.	Present
❖ Inability to sleep due to persistence of pain especially at night.	Present
❖ Loss of the motion in the shoulder joint.	
❖ Blockage in the movement of shoulder joint owing to the presence of osteophytes.	Present
❖ Weakness in the rotator cuff.	
❖ Presence of shoulder muscle atrophy.	Present
❖ Inflammation and tenderness in the shoulder can be a symptom of glenohumeral arthritis.	Present
❖ Motion in the shoulder joint produces clicking sound can be a symptom of glenohumeral arthritis.	Present
	Present
	Absent

EPIDEMIOLOGY OF GLENOHUMERAL ARTHRITIS

- ✓ Glenohumeral arthritis is known to be the third major type of degenerative joint disease; yet, it is the least frequent type of arthritis.
- ✓ It accounts for only three percent of the reported osteoarthritis cases.
- ✓ Most of the cases of glenohumeral arthritis are diagnosed at a later stage. The routine treatment opted for over fifteen percent cases is shoulder arthroscopy.

PROGNOSIS OF GLENOHUMERAL ARTHRITIS

The outlook for glenohumeral arthritis is good if diagnosed in time and simultaneous opting of a physical therapy exercises to restore the optimal range of motion. For the cases with severe degeneration, surgical measures are taken up to reinstate the shoulder movement.

CAUSES OF GLENOHUMERAL ARTHRITIS

The primary causes behind glenohumeral arthritis are:

- a) **Glenohumeral Arthritis Caused Due to Osteoarthritis:** It is the most common type of arthritis in which the cartilage protecting the shoulder bone degenerates over time.
- b) **Glenohumeral Arthritis Caused Due to Rheumatoid Arthritis:** It is a severe and serious form of arthritis which causes bone erosion and deformity of the joints due to damage in the lining of joints thereby resulting in severe pain and swelling.

c) **Post-Traumatic Arthritis as a Reason for Glenohumeral Arthritis:** Recurrence of traumatic incidences like fracture or shoulder dislocation, affects the articulating cartilage in the shoulder leading to progressive damage to the joint.

d) **Avascular Necrosis:** This occurs when the blood supply to the humerus reduces or gets obstructed due to fracture.

e) **Rotator Cuff Tear Arthropathy Causing Glenohumeral Arthritis:** The severe wear and tear in the rotator cuff results in the inability to hold and support the joint which simultaneously causes damage to the bone surface and arthritis. This condition is known as rotator cuff tear arthropathy and can contribute towards the onset of Glenohumeral arthritis.

PATHOPHYSIOLOGY OF GLENOHUMERAL ARTHRITIS

The presence of osteoarthritis marks the decreased levels of glycosaminoglycans, chondroitin sulfate, hyaluronic acid, and keratin sulfate. This results in diffusion of water into the cartilage and enhancement in the activity of matrix metalloproteinases or MMPs which causes the erosion of the extracellular matrix of the cartilage. As a consequence of the cartilage surface erosion, there occurs bone to bone contact which causes friction and severe pain.

RISK FACTORS OF GLENOHUMERAL ARTHRITIS

The predominant risk factors in case of glenohumeral arthritis are sports like weight lifting, baseball, soft ball, tennis, squash and badminton. Apart from the sports, presence of a prior condition like fracture, dislocation, age and post-surgical trauma also increase the danger of glenohumeral arthritis.

COMPLICATIONS OF GLENOHUMERAL ARTHRITIS

The complications in case of glenohumeral arthritis usually arise post-surgery. These are:

- Loss of blood
- Nerve injuries which can be permanent as well as temporary.
- Failure of glenoid component owing to the shoulder surgery.

DIAGNOSIS OF GLENOHUMERAL ARTHRITIS

The diagnosis for the glenohumeral arthritis involves the below mentioned diagnostic measures:

✚ **Physical Examination to Diagnose Glenohumeral Arthritis:** It involves analysis of the symptoms, pain, swelling and movement of the joint due to the condition.

✚ **X-Ray:** It is used to confirm the presence of the condition by identifying the presence of osteophytes and bone loss at the shoulder joint.

✚ **Arthrogram:** This technique is used to diagnose the presence of injury and tears on the rotator cuff.

✚ **CT scan:** The CT scan is used to identify the glenoid bone loss and presence of abnormalities in the joint.

✚ **MRI:** Though it is not used frequently for the diagnosis of the glenohumeral arthritis, but in certain cases it does help in providing the detailed information about the underlying soft tissue structures.

TREATMENT OF GLENOHUMERAL ARTHRITIS

The measures opted for the treatment of glenohumeral arthritis can be non-operative as well as surgical depending on the severity of the condition.

- **Non-Operative Treatments for Glenohumeral Arthritis:** These treatments are opted in the case of mild and manageable condition of glenohumeral arthritis. It includes:
 - **NSAIDs Medication:** The medications like Ibuprofen and Naproxen are given to control the inflammation.
 - **Corticosteroid Shots:** The corticosteroid injections are given when the NSAIDs fail to provide the required relief. These are anti-inflammatory injection that help in relieving the pain temporarily but do not help in curing the condition.
 - **Viscosupplementation:** This treatment involves injecting of hyaluronic acid into the joint so as to improve the cushioning and lubrication in between the joints as well as reduction of friction during movement.
 - **Non-Prescription Supplements:** These are glucosamine and chondroitin supplements which reduce the activity of enzymes that contribute to osteoarthritis. It also helps in the formation of new cartilage.
- **Surgical Procedures for Treating Glenohumeral Arthritis:** Surgical measures are selected when pain cannot be managed by medications. These measures prove to be effective in reducing the pain and re-establishing the motion within the joint.
 - **Arthroscopy:** This surgery is done for less severe cases of glenohumeral arthritis. The surgery is conducted by inserting an arthroscope into the shoulder joint by creating a small incision. The arthroscope is a small camera that helps in directing surgery using micro surgical instruments.
 - **Arthroplasty:** It is also known as the shoulder joint replacement surgery in which prosthetics are used to replace the damaged parts of the shoulder.

PREVENTION OF GLENOHUMERAL ARTHRITIS

Though difficult to avoid, the condition can definitely be prevented to a certain extent by following simple measures, which are:

- Abstaining from sedentary lifestyle.
- Ensure proper and continuous movement of joints.
- Regular stretching in order to avoid stiffness in the joint.
- Following strengthening exercises to increase the stress endurance of the muscles.
- Escaping and proper protection from heavy stress activities.

LIFESTYLE AND COPING WITH GLENOHUMERAL ARTHRITIS

The extent of recovery and coping regarding the condition depends on the intensity of pain, amount of activity, extent of injury and complexity of the surgical procedure. Recovery post the surgery entirely depends on the will power and dedication of the individual towards lifestyle modification and following of prescribed exercise routine.

NURSING DIAGNOSIS

1. Impaired Physical Mobility related to musculoskeletal disorder.
2. Self care deficit related to decrease strength.

3. Chronic Painrelated to chronic joint disease
4. Activity intolerance related to right shoulder pain.
5. Risk for Injuryrelated to mobility changes secondary to arthritis
6. Fluid volume deficit related to frequent micturation.
7. Fear and Anxietyrelate to hospitalization.
8. Risk for Infectionrelated to inadequate secondary defences.
9. Knowledge Deficit related to disease condition .
10. Fatigue related to unhealthy diet.
11. Sleep pattern disturbance related to pain.
12. Imbalance nutritional status less than body requirement related to unbalanced diet.

3. HEALTH EDUCATION

DIET:

- Advised the patient to take healthy diet and nutritive diet.
- Advised to take balanced diet.
- Instructed the patient to intake fresh green leaf vegetables.
- Instructed to take calcium rich diet like :
 - ✓ Raw Milk.
 - ✓ Yogurt or Kefir.
 - ✓ Broccoli.
 - ✓ Watercress.
 - ✓ Cheese. Bok Choy.
- Advised to take enough amount of fluids
- Advised the patient to avoid suger rich diet .

EXERCISE:

- Advised the patient to do shoulder exercise
 - ✓ Shoulder stretches
 - ✓ Shoulder strengthening exercises
 - ✓ Low impact aerobic workout.

PERSONAL HYGINE:

- Advised the patient to take bath with the help of assistant.
- Advised the patient to keep the surrounding neat and clean .
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FOLLOW UP:

- Advised the patient to take regular medication for diabetic.
- Advised to take medication for arthritis .
- Advised to take proper food in equal interval.
- Advised the patient to come for regular check up for blood sugar level.

4. CONCLUSION

Mrs. Ppamma was admitted in Sree Balaji college and hospital with the complains of right shoulder pain and bone pain all over the body .Then he diagnosed as glenohumeral arthritis .I have selected the patient for my Clinical presentation. I applied my theory knowledge practically and gained the knowledge about the disease condition .

5. REFERENCE

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