



ORIGINAL RESEARCH PAPER

Orthopaedics

EFFECTIVENESS OF LOCAL STEROID INJECTIONS IN CASES OF PERIARTHRITIS SHOULDER (ADHESIVE CAPSULITIS OR FROZEN SHOULDER)

KEY WORDS: Periarthritis shoulder

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ABSTRACT

Response to local steroid injections is studied in cases of Periarthritis (frozen) shoulder to know the efficacy in relieving joint pain and allowing free range of movements in AIMS,Hyd from 2013-2016

INTRODUCTION:

Adhesive capsulitis is the medical term for frozen shoulder which is a condition causing pain and restricted movement in the shoulder joint. It is extremely uncommon in young people, and is almost always found in the 40 + age group, usually in the 40-70 age range. Approximately 3% of the population will be affected by this, with slightly higher incidence amongst women, and five times higher prevalence in diabetics (10-20%). Medical problems associated with frozen shoulder are diabetes, hypothyroidism, hyperthyroidism, Parkinson's disease and stroke. It can also develop after immobilization of shoulder for a period of time (injury, surgery, fracture) which can be prevented by physiotherapy after period of immobilization.

- Primary - where there is no significant reason for pain or stiffness.
- Secondary - Which follows as a result of an event such as trauma, surgery or illness

Pain from frozen shoulder is usually dull or aching & is typically worse early in the course of the disease with movement of the arm. The pain is usually located over the outer shoulder area and sometimes the upper arm.

The exact cause of a frozen shoulder is not known & thought that the lining of the joint (the capsule) becomes inflamed, which causes scar tissue to form & leaves less room for the humerus restricting the movement of the joint. The increased prevalence among diabetics (particularly insulin-dependent diabetics) involving both joints may be due to glucose molecules sticking to the collagen fibers in the joint capsule, which causes stiffness. Hormonal changes may be responsible for the higher incidence among women around the menopausal period. Shortening of one of the ligaments of the shoulder with poor posture can contribute to this condition. Prolonged immobility (such as after a fracture) also can cause this condition.

There are three phases that the condition will pass through; a freezing phase(2-9 months) where the joint tightens up, a stiff phase(4-12 months) where the movement in the shoulder is significantly reduced and a thawing phase(5-12 months) where the pain gradually reduces and mobility increases.

Frozen shoulder is diagnosed based on signs, symptoms, and a physical exam, paying close attention to the arms and shoulders. People with frozen shoulder have limited range of motion both actively and passively. Structural problems can only be identified with the help of imaging tests, such as an X-ray or Magnetic Resonance Imaging (MRI).

Treatment

Frozen shoulder generally gets better over time, although it may take up to 3 years.

The focus of treatment is to relieve pain and improve movement

and strength of shoulder through physical therapy. In time and with treatment, over 90 percent of patients experience relief & recovery may be slow, and symptoms can persist for several years. The treatment options are by non-surgical & surgical methods.

Nonsurgical Treatment

More than 90% of patients improve with relatively simple treatments

Non-steroidal anti-inflammatory medicines. Drugs like aspirin and ibuprofen reduce pain and swelling.

Steroid injections. Cortisone is a powerful anti-inflammatory medicine that is injected locally.

Physical therapy. Specific exercises will help restore motion. These may be under the supervision of a physical therapist or via a home program. Sometimes heat is used to help loosen the shoulder before the stretching exercises.

- Finger Ladder exercise
- Shoulder wheel exercise
- Pendulum exercise
- Shoulder stretches

Surgical Treatment

If symptoms are not relieved by therapy and anti-inflammatory medicines, surgery may be considered anticipating the risks involved with surgery. The most common methods include manipulation under anesthesia and shoulder arthroscopy to cut through the tight portion of the joint capsule. After surgery, physical therapy is necessary to maintain the motion that was achieved with surgery. Recovery time varies from 6 weeks to three months. Long-term outcomes after surgery are generally good, with most patients having reduced or no pain and greatly improved range of motion. In some cases, however, even after several years, the motion does not return completely and a small amount of stiffness remains. Although uncommon, frozen shoulder can recur, especially if a contributing factor like diabetes is still present.

MATERIAL & METHODS: 80 cases of frozen shoulder were diagnosed by history of pain and limitation of movements, clinical examination (tenderness medial to Coracoid process/ Coracohumeral ligament and limitation of abduction and rotation movements of shoulder) and X-ray to rule out bone lesions. Risk factors like Diabetes, thyroid disease, Stroke, Parkinson's disease and previous immobilization (trauma, upper limb fracture) evaluated. Initially NSAIDs were given and later local steroid (Triamcinolone) inj. administered and physical therapy advised. Follow up was for 6 months to one year.

RESULTS: Analyzed and given below.

TABLE 1. INCIDENCE:

	NO	%
AGE OF THE PATIENT	10	
<40yrs	40	12.5%
41-50 yrs	20	50%
51-60 yrs	10	25%
61-70 yrs	NIL	
>70 yrs		12.5%
		0%
SEX OF THE PATIENT	32	40%
MALE	48	50%
FEMALE		
RISK FACTOR	NO	%
1. DIABETES	24	30%
-KNOWN DIABETICS	16	20%
-DIAGNOSED(DENOVO)	8	10%
2.HYPERTHYROIDISM	NIL	0%
3.HYPOTHYROIDISM	4	5%
4.STROKE	4	5%
5.PARKINSON'S DISEASE	NIL	0%
6.PREVIOUS IMMOBILIZATION	4	5%
- TRIVIAL TRAUMA	4	5%
-UPPER LIMB FRACTURE		
7.NO RISK FACTOR	40	50%

TABLE 2. DURATION OF COMPLAINTS

	NO	%
< 3MONTHS	22	27.5%
3-5 MONTHS	40	50%
5-9 MONTHS	18	22.5%

TABLE 3.SEVERITY OF SIGNS AND SYMPTOMS:

	NO	%
MILD	16	20%
MODERATE	32	40%
SEVERE	32	40%

TABLE 4. DURATION OF RELIEF OF SYMPTOMS AFTER LOCAL STEROID INJ.

SYMPTOM	TIME	CASES
PAIN	48-72 hrs	ALL CASES (100%)
JOINT MOBILITY	NORMAL IN 1 WEEK IMPROVEMENT 2-3 WEEK	MILD CASES (20%) MODERATE & SEVERE CASES (40%+40%)

DISCUSSION:

All cases of Periarthritis (Frozen shoulder) presented with pain and limitation of shoulder movements in the 1st phase (freezing phase) only, maximum number of patients (62) within 1st 5months of onset of symptoms. Incidence is more after 40 years of age maximum between 41-50 years (50%).Only 12.5% cases were encountered in people <40 years and there were no such cases after 70 years in the present study. Females showed higher incidence (60%).Among the risk factors diabetes is commonly seen (30%) Among them 20% are known diabetics and in the remaining 10% diabetes was diagnosed when patients were investigated. Hypothyroidism is found in 5%. Not even a single case of hyperthyroidism or Parkinson's disease were encountered in the study group. H/O Stroke (cerebral thrombosis with hemiplegia) is present in 4 cases. Previous immobilization of upper limb is seen in 5% cases of trivial trauma and 4 cases of upper limb fractures. In the remaining cases there is no risk factor.

X-ray is helpful in identifying bony lesions (secondary with primary adenocarcinoma lung) and fracture greater tuberosity of humerus) which presented with symptoms similar to frozen shoulder and excluded from the present study. All cases of diabetes and hypothyroidism treated by Physician and some amount of pain relief is seen when diabetes is under control. Moderate to severe pain with limitation is seen in 80% of cases. In all cases NSAIDs tried for relief of symptoms and as there was not much

improvement local steroid Triamcinolone injection is given pain relief is found in all cases within 48-72 hrs and range of movements improved within one week in mild cases and within 2-3 weeks in moderate and severe cases. Recurrence is seen in 15% of cases after 6months as mild pain without limitation of movements & responded well to NSAIDS. No patient was administered local steroid injection for second time.

CONCLUSIONS:

people with Periarthritis shoulder can be treated effectively by local steroid injections followed by physiotherapy. X-ray s should be taken to exclude any bony lesions before making a diagnosis. Very few people with recurrence of symptoms after 6 months improved with NSAID. Steroid injections should be used judiciously in diabetic patients.

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