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SUPRASCAPULAR NERVE BLOCK FOR THE MANAGEMENT OF RIGHT FROZEN SHOULDER IN A 60 YEAR OLDDIABETIC FEMALE UNRESPONSIVE TO INTRAARTICULAR STEROID INJECTION.

Anaesthesiology

Dr Ruby Guleria* MD Anaesthesia, Dr RPGMC Tanda HP. *Corresponding Author

ABSTRACT

Adhesive capsulitis (frozen shoulder) is a common painful and often distressing shoulder condition. It is often refractory to conventional pharmacotherapy. Treatment options may remain unsatisfactory. Suprascapular nerve block, a simple and cost effective interventional technique may reduce shoulder pain in the long term hence eliminating the need for analgesic drugs and increasing mobility of the shoulder joints. We discuss a case of a 60 year old diabetic female with right adhesive capsulitis causing severe shoulder pain unresponsive to previous intraarticular steroid injections.

KEYWORDS

Frozen shoulder, adhesive capsulitis , suprascapular nerve block.

INTRODUCTION

Frozen shoulder or adhesive capsulitis is a common problem presenting as shoulder pain that is moderate to severe and a progressive loss of movement results in a loss of function. Painful stiffness of the shoulder is an ill defined clinical entity that is difficult to assess and delicate to treat.[1]

It is associated with synovitis and capsular contracture. It can be idiopathic or be associated with another systemic disease, of which, the most common is diabetes mellitus. Peak age of onset is between 40 and 60 years and women are affected at a slightly higher rate.[2]

Treatment options include analgesic therapy such as non steroidal anti-inflammatory drugs, intraarticular steroid injections and manipulation under general anaesthesia or arthroscopic capsular release.[3]

Suprascapular nerve block (SSNB) is a safe treatment modality aimed at blocking the suprascapular nerve which is the major sensory nerve to the shoulder especially the posterior and superior aspect and is an accessible target.

Chronic shoulder pain syndromes in which SSNB has been used include rheumatoid arthritis, osteoarthritis of the glenohumeral joint, shoulder pain following stroke and various rotator cuff disorders.[4]

Case Report

A 60 year old diabetic female was referred to the pain clinic from from the orthopedic OPD as a diagnosed case of right frozen shoulder for the past 2 years unresponsive to a total of 3 doses of intraarticular steroid injections (40mg methylprednisolone acetate in each) repeated at 4 weeks interval.

The patient complained of painful stiff right shoulder shoulder causing inability to use the arm for routine activities and sleep disturbance due to pain at night and inability to lie on the affected side.

All laboratory investigations of the patient were in normal range with a good glycemic control (HbA1C 6%). Sedimentation rate, C reactive protein and rheumatoid factor levels were also normal. Vitals of the patient were normal. Right shoulder pain was 8 out of 10 on the Visual Analog Scale (VAS) and the range of motion was markedly reduced during abduction and external rotation.

The patient was planned for a landmark guided right suprascapular nerve block after explaining the procedure. An informed consent was obtained. All standard vital monitoring was attached and pre procedure vitals noted. The patient was positioned in an upright sitting position with back and shoulder exposed, for the posterior approach to access the scapula and suprascapular notch.

The skin overlying the block site was prepared using 2% chlorhexidine solution and allowed to dry and a local anaesthetic (2% lignocaine) was infilterated at the site of injection. Under all aseptic precautions, a 22 G needle was introduced through the skin, 2 cm cephalad to the midpoint of the spine of scapula. The needle was advanced parallel to the blade of scapula till bony contact was made with the floor of suprascapular fossa. After negative aspiration for blood, 10 ml 0.125% plain Bupivacaine and 40mg methylprednisolone were injected slowly.

Post procedure vitals were noted. Pain and range of motion were noted at the following intervals: pre procedure, 30 minutes post procedure, 1 week and 4 weeks after the procedure.

No procedural complications such as pleural puncture, vascular puncture, hematoma at the site of injection, rash, itching, numbness, tingling and paraesthesias were noted.

It was noted that the VAS score reduced from 8 out of 10 to 5 and 2 out of 10 after 30 minutes and 4 weeks post procedure. There was also an overall improvement in all range of shoulder movements i.e. flexion, extension, abduction, internal rotation and external rotation. After 4 weeks, the patient had improved quality of life due to decreased sleep disturbances and ability to perform daily activities easily.

DISCUSSION

Frozen shoulder was first described by Codman in 1934 as a painful shoulder condition of insidious onset that was associated with stiffness and difficulty of sleeping on the affected side.[5] It can be primary or idiopathic or may be associated with systemic disorders such as diabetes mellitus, hypothyroidism, cardiac disease, pulmonary disease or stroke.[6] The incidence of frozen shoulder associated with systemic disorders is reported to be 10-36% and is often more severe and resistant to conventional treatment modalities.

The suprascapular nerve is a mixed nerve supplying sensory fibres to about 70% of the shoulder joint including the superior and posterosuperior regions of the shoulder joint and capsule.[7] the suprascapular nerve block has gained popularity as an effective and simple treatment option for frozen shoulder due to ease of technique, easy identification of landmarks and reduced complications after advent of ultrasound guided nerve block techniques.

CONCLUSION

Suprascapular nerve block effectively decreases patient's pain in cases of frozen shoulder refractory to conventional pharmacotherapy, also improving the range of motion of the shoulder joint and quality of life.

Conflict Of Interest:
All authors declare they have no conflict of interest

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