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## The study of combination therapy [thiocolchicoside+aceclofenac+paracetamol] in cervical spondylosis

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### ABSTRACT

Cervical Spondylosis is a very common degenerative disorder causing neck pain in the middle aged group individuals. The symptoms can vary from mild neck pain to neck stiffness, radiating pain along the upperlimbs. The main objective is to relieve pain, numbness and weakness of hands caused due to encroachment of nerve roots by spondylosis. It is postulated that the initial pain eliciting event resulting from Cervical Spondylosis, causes muscle spasm of neck muscles, producing accumulation of inflammatory mediators, which exacerbate spasm resulting in exaggeration of pain. Our study of combination of Thiocolchicoside( a muscle relaxant, which has no side effects on psychomotor performance and has no sedative effect), Aceclofenac( a non steroidal anti-inflammatory and analgesic ), Paracetamol (a safe analgesic), which aims to break this pain-spasm cycle is now available for effective management of Cervical Spondylosis.

**Key words:** Cervical Spondylosis, Inflammatory mediators, Thiocolchicoside, Aceclofenac, Paracetamol.

### INTRODUCTION

Cervical Spondylosis is a very common cause of neck pain, which is caused due to excess bony growth at the margins of cervical vertebrae encroaching to neural foramina in the cervical vertebrae resulting in severe compression of the nerve roots emerging from the cervical foramina<sup>7</sup>.

The highest prevalence is among the people aged between 40 to 60 years, with a male to female ratio of 3:1. The commonest site of spondylosis is in between C5-C6 followed by C4-C5 in the neck, but th of spondylosis is also seen in Lumbar Vertebrae at L4-L5 region.

Some people who are mainly prone for Cervical spondylosis are:- Software engineers, drivers, among doctors Neurosurgeons, orthopaedic surgeons are mainly prone. Some risk factors are also included:- Smoking, poor muscle tone, advancing age, obesity, incorrect sleeping with bulky pillows.

The symptoms of a Cervical Spondylosis include :- Neck pain, neck stiffness, radiating pain along the upper limbs, numbness of fingers especially thumb and index fingers. Weakness of hand grip. Pain worsened during the night disturbing the sleep, pain is exaggerated after a long journey<sup>8</sup>  
Acute nerve compression may result in severe weakness of upper limbs and lower limbs. The weakness is mainly spastic in nature.

Cervical spondylosis is often confused with Prolapsed intervertebral Disc. We must remember that Cervical Spondylosis is a degenerative disorder occurring in slightly elder people compared to disc prolapse<sup>7</sup>.

Rational of Thiocolchicoside+ Aceclofenac+ Paracetamol Therapy:- A popular pain-spasm cycle suggests that an initial pain evoking events results in a self perpetuating cycle in which skeletal muscle spasm produces accumulation of inflammatory mediators which exacerbate the spasm, which in turn exacerbates pain. These limitations can be addressed by combining agents with different mechanisms of action., to produce synergistic analgesic effect<sup>2</sup>.

Combination of a skeletal muscle relaxant( Thiocolchicoside) <sup>1</sup>and Non steroidal anti-inflammatory drug( Aceclofenac), and safe and effective analgesic(Paracetamol) has been shown to be more effective than using single drugs. The skeletal muscle relaxant resolves the spasm part of the cycle,NSIADS will address the inflammatory mediators and analgesic will attend immediate pain<sup>4</sup>.



## MATERIALS AND METHODS

The study was conducted in the Department of Orthopaedics, Government General Hospital, Kurnool Medical College for a duration of one year from September 2013 to August 2014.. The study was undertaken to evaluate the efficacy and safety of a fixed combination of Thiocolchicoside, Aceclofenac and Paracetamol. The study has involved 100 patients of 40 – 60 years of age suffering from Cervical Spondylosis. All the patients were treated for a period of 10 days on a twice a daily dose of the combination drug.

Pain relief, mobility of the neck and working capacity of all the individuals were assessed on the 3<sup>rd</sup> day and 10<sup>th</sup> day of the treatment of all the patients.

## RESULTS AND DISCUSSION

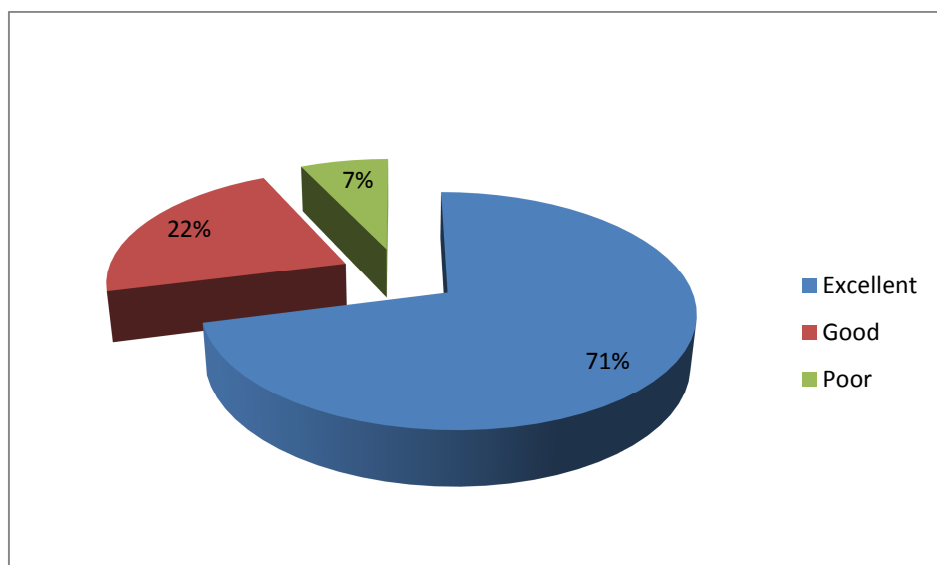
As per our treatment of 100 patients by combination of drugs, the efficacy of trial drug, 71% of patients had excellent relief of pain from 3<sup>rd</sup> day onwards, mobility was good from 10<sup>th</sup> day onwards, working capacity considerably increased from 10<sup>th</sup> day of treatment.

In 22% of patients the pain relief was good from 3<sup>rd</sup> day reaching to maximum on 10<sup>th</sup> day. The mobility of neck and working capacity are good on 10<sup>th</sup> day of treatment.

In 7% of the patients the relief of pain was poor, the mobility of the neck never returned, they had considerable work loss due to severe weakness of upper limbs.

It was concluded that a combination of efficacy of Thiocolchicoside + Aceclofenac+Paracetamol significantly reduces the intensity of pain and improves the mobility of the neck and also enhances the working capacity of most of the patients .

DURATION	3 <sup>rd</sup> day of treatment	10 <sup>th</sup> day of treatment
Pain relief	56 patients	71 patients
Mobility of the neck	21 patients	70 patients
Working capacity	5 patients	70 patients



### CONCLUSION

The primary aim of management of patients with Cervical Spondylosis is to maximize long term healthy related quality life. Studies have shown that combination of a skeletal muscle relaxant and an NSAID with a Paracetamol is superior to single drugs . Using 3 drugs separately increase cost treatment for the patients twice that of combination treatment. The compliance of the patient for combination treatment is much more than all 3 drugs taken separately . Thiocolchicoside has is a very safe and effective drug when compared to Tizanidine .Thiocolchicoside is more effective muscle relaxant than Tizanidine.

Aceclofenac has a better Gastrointestinal tolerability when compared to other analgesics like Diclofenac.

Paracetamol has shown better efficacy in combination with NSAIDS.

A Combination of Thiocolchicoside +Aceclofenac+Paracetamol ,is now available in the market for effective management of neck pain due to Cervical Spondylosis . since its dosage is just twice a daily the patients compliance rate is high.

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