

**Original article:**

## **Study of evaluation of effect of hyperuricemia in neck and back pain and association between hyperuricemia and neck, low back pain**

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**Abstract:**

**Introduction:** On the backdrop of various patients attending SMBT hospital orthopaedics OPD department ,lot of patients presenting with spine related complaints were found to be hyperuricaemic ,therefore I decided to go through the literature regarding the similar related topics and I couldn't find any such topic in which Neck pain and back pain association with hyperuricaemia,that too in a rural setup patients was studied in details, hence the need to initiate such a kind of study was felt and initiation of the study was done.

**Materials and methods :** Patients between the age group of 18-65 yrs with either gender presenting to SMBT hospital ,Orthopaedics OPD with chief complaints of Neck pain / Low back pain with sample size 100. Studies were excluded if enrolled participants had already been definitively diagnosed with primary malignancies,or other inflammatory arthritides prior to enrollment.

**Results:** Amongst 10 subjects presenting with neck pain 6 were male and 4 were female., Amongst 30 subjects presenting with back pain 20 were male and 10 were female. Age wise and gender wise distribution revealed that Between age group 18-30 , there were 10 subjects , 9 male and 1 female , Between age group 31-50, there were 17 subjects , 11 male and 6 female , Between age group > 50 , there were 10 subjects , 6 male and 4 female .

**Conclusion :** Spinal gout most commonly presents as Neck pain or back pain with majority of reported patients with elevated uric acid and hence the patients attending routine orthopaedic outpatient department with the chief complaints of Neck pain or back pain should be primarily screened with serum uric acid levels. Slight male predominance was found in the study and back pain was a commoner complaint .

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On the backdrop of various patients attending SMBT hospital orthopaedics OPD department ,lot of patients presenting with spine related complaints were found to be hyperuricaemic ,therefore I decided to go through the literature regarding the similar related topics and I couldn't find any such topic in which Neck pain and back pain association with hyperuricaemia,that too in a rural setup patients was studied in details, hence the need to initiate such a kind of study was felt and initiation of the study was done .<sup>1,2</sup>

Previously invariably almost all the patients attending OPD with chief complaints of Neck pain and back pain and back pain were examined ,ordered x-rays and prescribed analgesics ,but the similar patients were following back with same complaints repeatedly and when screening of these patients was done with serum uric acid ,most of them

had elevated levels , some of them were treated for hyperuricemia and got relieved of symptoms ,hence it was thought that if such a kind of study is carried out on a large number of patients would reveal significant results and would potentially benefit the society , patients referred for radiography and MRI scans, CT scans and other costly investigations can be avoided thus avoiding cost burden over the society while the actual patient satisfaction indices would improve .<sup>3</sup>

Till recently the research work conducted was focused more on Established cases of gout and spinal gout ,but no such study associating symptomatology (neck pain and back pain ) with laboratory serum finding ( serum uric acid ) had been conducted , I want to progress ahead with pioneering such a kind of study and initiating this kind of study in rural areas in and around Nashik,where the incidence of hyperuricaemia was found to be significantly higher .

**Materials and methods :**

Patients between the age group of 18-65 yrs with either gender presenting to SMBT hospital ,Orthopaedics OPD with chief complaints of Neck pain / Low back pain with sample size 100.

**Exclusion criteria:** Studies were excluded if enrolled participants had already been definitively diagnosed with primary malignancies,or other inflammatory arthritides prior to enrollment.

**Study design :** Short term research project, Prospective study of neck pain and low back pain associated with hyperuricemia .

**Duration of study :** 2 months

**Investigations :** Serum uric acid {hyperuricaemia defined as serum uric acid levels >5}.

**Results:**

Amongst 10 subjects presenting with neck pain 6 were male and 4 were female., Amongst 30 subjects presenting with back pain 20 were male and 10 were female.

Age wise and gender wise distribution revealed that Between age group 18-30 , there were 10 subjects , 9 male and 1 female , Between age group 31-50, there were 17 subjects , 11 male and 6 female , Between age group > 50 , there were 10 subjects , 6 male and 4 female .

**Discussion:**

It is possible that the serum uric acid levels will regress with aggressive effective urate lowering agents but definitive evidence for this would require a prospective therapeutic study , Although this study provides a broad review of cases involving hyperuricemia associated with neck and back pain ,there are some limitations ,the absence of certain information such as post treatment outcomes ,limited the depth of our analysis in certain cases ,the majority of clinical features for spinal gout such as neurological symptoms are nonspecific .Thus one must rule out other common diagnosis such as disc herniation ,tumor, infection prior to diagnosing a patient with spinal gout .

Findings in our current study ,we revealed certain new gaps in the literature that had not been previously exposed or enough described .<sup>4</sup>

After critical thinking and analysis of the current research problem in question ,based on an evidence based interpretation of findings ,it can be stated that gout in the spine has much larger ,greater incidence as derived from previous studies and works and the symptomatology of back pain and neck pain must be associated with hyperuricaemia and further management should be aimed at prevention rather than cure .<sup>5</sup>

This well documented study impresses us the importance of a thorough physical examination of spine patients including integuments and joints outside the axial skeleton .It stands to reason that an earlier diagnosis in these patients would very reasonably allowed for non surgical medical management and helped avoid sugery and subsequent disability .

It can be aptly said that this study is a Masterstudy and a Basic research work related topic , we will evaluate further for specific age related values and a comparison between various areas within the spine based on further investigations like MRI,CT scans , which will be a very useful study in view of prevention and reduce the overall prevalence and needs further evaluation.

### **Conclusion**

Spinal gout most commonly presents as Neck pain or back pain with majority of reported patients with elevated uric acid and hence the patients attending routine orthopaedic outpatient department with the chief complaints of Neck pain or back pain should be primarily screened with serum uric acid levels. Slight male predominance was found in the study and back pain was a commoner complaint .

### **References:**

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