

## **Clinical Evaluation of Cystone – An Indigenous Preparation – In Arthritic Conditions**

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Cystone, an indigenous remedy of The Himalaya Drug Co., is mainly indicated in urinary lithiasis and is said to dissolve urinary calculi. Quite a few urinary stones are rich in uric acid and the beneficial effects claimed for Cystone could be due to increased uric acid excretion<sup>1</sup>.

Gouty arthritis is characterised by high serum uric acid levels and the known anti-gout agents bring about relief by uricosuric effect or by inhibition of uric acid synthesis<sup>2,4</sup>.

The objective of this work was to see if Cystone has any beneficial effect in hyperuricaemic arthritic patients.

### **MATERIAL AND METHODS**

Serum uric acid levels were estimated<sup>5</sup> in 235 arthritic patients referred by the Orthopaedic Outdoor of the Sassoon General Hospitals, Pune. Out of these, 90 patients – 67 males and 23 females – were found to have uric acid levels higher than 5 mg% (the highest in normal range). Detailed clinical examination of these patients was done and initial score of various clinical symptoms like pain, tenderness, swelling, restricted joint movement etc. was recorded by the Orthopaedic Surgeon. Clinical manifestations were scored according to the severity e.g. severe pain(+++), moderate pain(+++), bearable pain(++) and mild pain(+).

Cystone tablets were given in the dose of 2 tablets 3 times a day. Total clinical score of the symptoms for each patient was recorded initially and then again after 15 days and one month of Cystone administration. The serum uric acid levels were also estimated at the same time. However, the clinician only assessed the clinical improvement or otherwise and was not aware of the uric acid levels. Likewise, the clinical records were not available to the workers estimating uric acid levels.

Changes in uric acid levels after 15 days and one month were compared with the initial value using paired 't' tests. At the end of the study, improvement in clinical manifestations was assessed employing non-parametric tests. Spearman's test was used to study the correlation between the fall in uric acid levels and improvement in the clinical pictures.

### **RESULTS**

It is noteworthy that amongst the arthritics about 38% cases had raised uric acid levels (90 out of 235). Thirty nine out of these 90 hyperuricaemic patients did not report for the subsequent studies. Hence, follow-up was possible with only 51 patients. Only 36 patients could complete the proposed one month's study.

Table 1 shows the classification of these 36 patients on the basis of their clinical conditions. Fifty per cent cases had osteoarthritis of the knee joint.

Table 2 shows the changes in uric acid levels and their statistical significance.

**Table 1:** Classification of the patients on the basis of clinical conditions

| Sl. No. | Clinical condition                     | No. of cases |
|---------|--|--------------|
| 1.      | Osteoarthritis knee                    | 18           |
| 2.      | Low backache                           | 4            |
| 3.      | Periarthritis right shoulder           | 1            |
| 4.      | Cervical spondylosis                   | 2            |
| 5.      | Frozen right shoulder                  | 2            |
| 6.      | Osteoarthritis spine                   | 2            |
| 7.      | Polyarticular rheumatoid arthritis     | 1            |
| 8.      | Prolapsed intervertebral disc          | 1            |
| 9.      | Pain in both heels (Plantar fasciitis) | 3            |
| 10.     | Pain in the neck                       | 1            |
|         | Total                                  | 36           |

**Table 2:** Mean serum uric acid levels

| No. of patients | Mean initial serum uric acid in mg $\pm$ SE | Mean serum uric acid in mg $\pm$ SE after 15 days | Mean serum uric acid in mg $\pm$ SE after one month |
|-----------------|---|---|---|
| 36              | 5.80 $\pm$ 0.23                             | 5.30 $\pm$ 0.25<br>( $p < 0.05$ )                 | 4.83 $\pm$ 0.23<br>( $p < 0.001$ )                  |
| 51              | 6.008 $\pm$ 0.18                            | 5.51 $\pm$ 0.23<br>( $p < 0.01$ )                 |   |

The uric acid levels – initial, after 15 days and after 30 days – showed a significantly decreasing trend ( $\alpha=0.001$ ). The total clinical score of manifestation taken initially and then after 15 days and 30 days also showed a significantly decreasing trend ( $\alpha=0.001$ ). However, there is no correlation between the decreasing uric acid levels and the clinical improvement observed, as judged by the Spearman's test. Value of R is 6762.5, which is within normal range. (Lower critical value 5195 – Higher critical value 10345).

## OBSERVATIONS

Disturbance in uric acid metabolism has been observed in about 38% cases having arthritic manifestations. Though it is stated that the incidence of gout in our country is comparatively low, from this study it would appear that quite a few patients with joint affection have associated hyperuricaemia (osteoarthritis of knee and the like).

Cystone, an indigenous tablet preparation of The Himalaya Drug Co., consists of:

|                                |       |
|--------------------------------|-------|
| Exts. Didymocarpus pedicellata | 65 mg |
| Saxifraga ligulata             | 49 mg |
| Rubia cordifolia               | 16 mg |
| Cyperus scariosus              | 16 mg |
| Achyranthes aspera             | 16 mg |
| Onosma bracteatum              | 16 mg |
| Vernonia cinerea               | 16 mg |
| Shilajeet (Purified)           | 13 mg |
| Hajrul yahood bhasma           | 16 mg |

As stated by Kirtikar and Basu<sup>6</sup> among the ingredients of Cystone, Rubia cordifolia, Cyperus scariosus, Achyranthes aspera, Onosma bracteatum, Ocimum basilicum, Tribulus terrestris, Mimosa pudica, Pavonia odorata and Tectona grandis seeds have analgesic, antipyretic and anti-inflammatory effects and are as such used in conditions like lumbago, rheumatism, neuralgia and gouty joints; whereas rest of the ingredients are mainly used in various urinary conditions.

From the results it is clear that administration of Cystone decreases the raised uric acid levels significantly and also offers significant improvement in the clinical picture. Though there is no

positive or negative correlation between the fall in uric acid levels and the clinical improvement, administration of Cystone offers definite relief to the patients. Thus, Cystone can be used as an adjuvant in the treatment of various arthritic conditions.

Because of the significant fall observed in the uric acid levels, administration of Cystone may be of value in gout also. Once the attack of gout is brought under control, Cystone may prove useful in maintaining the uric acid levels low.

### **SUMMARY**

Cystone, an indigenous preparation of The Himalaya Drug Co., has been found to produce a significant fall in serum uric acid levels and show improvement in the clinical picture of various arthritic conditions. It can thus be used in the treatment of gout and also as an adjuvant in the treatment of various arthritic conditions associated with hyperuricaemia.

### **REFERENCES**

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