



## Evaluation of Factors Influencing the Clinical Response on Giving Intra-Articular Triamcinolone Hexacetonide in Knee Osteoarthritis

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### KEYWORDS:

#### Aims & Objectives:

- To assess the efficacy and safety of a single intra-articular injection of triamcinolone hexacetonide (THA) in knee osteoarthritis (OA)
- To examine factors which may relate to treatment efficacy.

#### Methods:

Forty two patients with clinical and radiographic evidence of knee OA were studied. It was a randomized control trial. Two groups were made each having 21 cases which were randomly selected the study was conducted in department of orthopedics NIMS Medical college and hospital for the duration of one year between june 2011 to july 2012 the groups were allocated to receive either THA (20 mg in 1 ml) or placebo (0.9% normal saline, 1 ml). Follow up assessments evaluated the following outcome variables: patient opinion of overall change in the treated knee, visual analogue pain score (VAS), distance walked in one minute (WD), and Health Assessment Questionnaire modified for lower limb function (HAQ).

#### Results:

Seventy eight percent of THA and 49% of placebo treated patients reported overall improvement at week 1 ( $p < 0.05$ ). At week 6, improvement was reported in 57% and 55% of patient groups, respectively. VAS improved in both groups at week 1 (THA,  $p < 0.001$ ; placebo,  $p < 0.05$ ) and week 6 (both  $p < 0.01$ ). Improvement in VAS was significantly greater among THA treated patients at week 1 only ( $p < 0.01$ ). Subgroup analysis of THA treated patients revealed greater improvement in VAS among pa-

tients with clinical evidence of an effusion ( $p < 0.05$ ), and those who had synovial fluid successfully aspirated at the time of injection ( $p < 0.01$ ). WD improved in THA treated patients at 'week 1 ( $p < 0.001$ ), and in both groups at week 6 (THA,  $p < 0.001$ ; placebo,  $p < 0.001$ ). Improvements in HAQ were seen in THA patients only at weeks 1 and 6 ( $p < 0.05$ ).

#### Conclusion:

THA provided short term pain relief in knee OA. Increased benefit was associated with both clinical evidence of joint effusion and successful aspiration of synovial fluid at the time of injection. Osteoarthritis (OA) of the knee is one of the most common rheumatic disorders and a frequent cause of pain and disability, particularly among the elderly. It is estimated that between 18 and 33% of individuals over 65 years of age have radiographic evidence of knee OA, this being more common in women and increasing to over 50% by age 80.3 between 20 and 60% of patients with radiographic disease have associated symptoms, and up to 50% report disability. Despite the enormous public health problem presented by this condition, there is no singularly effective medical treatment. Two double blind placebo controlled studies have reported a transient benefit from intra-articular triamcinolone hexacetonide (THA). In view of concern regarding efficacy and possible deleterious effects, judicious use of intraarticular steroids in OA has been advised. We conducted this placebo controlled study in an attempt to re-evaluate the efficacy of a single intra-articular injection of THA in knee OA and examine factors which may relate to treatment efficacy.