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# A Randomized Controlled Trial on the Effects of Oral Collagen Treatment on the Medial Knee Joint Space and Functional Outcome among Veterans Memorial Medical Center Patients Diagnosed with Osteoarthritis of the Knee

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## ABSTRACT

**General Objective:** To determine the effects of oral collagen treatment on the medial knee joint space and the functional outcome among patients diagnosed with osteoarthritis of the knee.

**Specific Objectives:** (a) To determine the effect of oral collagen treatment in improving the functional status of patients diagnosed with osteoarthritis of the knee using the Western Ontario and McMaster Universities (WOMAC) knee osteoarthritis index, Likert scale version; (b) to determine the effect of oral collagen treatment in the knee joint space of patients diagnosed with osteoarthritis of the knee viewed and measured radiographically; and, (c) to compare the effect of oral collagen treatment with the standard treatment using non-steroidal anti-inflammatory drug (NSAID) as to WOMAC knee osteoarthritis index and medial knee joint space.

**Study Design:** Experimental, randomized, single-blind observer, open-labeled, controlled trial.

**Setting:** Government hospital, out-patient setting.

**Patients:** One hundred and fifty patients diagnosed with knee osteoarthritis were randomized into two groups. A sample of 113 patients completed the study. Fifty-five patients were in Group A, while 58 patients were in Group B.

**Methods/Interventions:** Eligible subjects were randomly assigned to Group A who received oral collagen hydrolysate, 400 mg/capsule 3 capsules once a day at bedtime, or to Group B who underwent the conventional treatment of non-steroidal anti-inflammatory drug in the form of aceclofenac 100 mg/tablet 1 tablet twice a day for five days then as needed for pain. Both groups were also prescribed with topical analgesic in the form of ketoprofen gel to be applied twice a day as needed for pain, and physical therapy treatment thrice a week for two weeks. Follow up evaluation was done every month to assess developments from the symptoms. Initial radiograph of the knee was done prior to the intake of the medications and repeated after six months of completion of the intervention.

**Main Outcome Measurements:** Symptoms of knee osteoarthritis were evaluated using the WOMAC knee osteoarthritis index, Likert scale done every month for six months. Radiographs of the knee were obtained and measurement of the medial compartment of the tibiofemoral joint was done using a standard ruler in millimeters at the start of the study and after six months.

**Results:** Patients in Group A significantly scored lower in the average WOMAC score from baseline to the sixth month follow up. On the other hand, patients in Group B had no significant change in their average WOMAC score after six months. There was no significant difference in the medial knee joint space measured at baseline and after six months in both groups.

**Conclusion:** The administration of 1,200 milligrams of collagen hydrolysate daily for a period of six months has a beneficial impact on pain symptoms and joint function in patients with osteoarthritis.

**Key Words:** *Osteoarthritis, collagen hydrolysate, cartilage*

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