

A randomized, doubled-blind study comparing multiple doses of *Channa striatus* supplementation for knee osteoarthritis

ABSTRACT

Knee osteoarthritis (OA) is the leading cause of chronic disability at older age. *Channa striatus* (CS) is a freshwater fish that is traditionally valued for its medicinal properties in promoting wound healing and reducing post-operative pain. This study evaluate the efficacy of different doses of oral *Channa striatus* extract on primary knee osteoarthritis patients. A randomized, double-blind, placebo-controlled 3-arm trial was conducted comparing oral CS extract 1000 mg/day or 500 mg/day and placebo among knee OA patients for a 6-month intervention period. The main outcome measures were Western Ontario and McMaster University Osteoarthritis Index (WOMAC), analgesic scores and serum cartilage oligomeric matrix protein (COMP). Laboratory-based blood tests were used as safety measures. A total of 120 patients were randomized, and 112 patients were included in the intention-to-treat analysis. Significant reductions in WOMAC stiffness and function scores were achieved at month 6 in CS 1000 mg/day and CS 500 mg/day compared to placebo groups ($p < 0.05$). No significant differences were found between the groups in terms of analgesic scores, serum COMP and biochemical parameters. No serious adverse events were reported in the study. In conclusion, both doses of CS showed similar efficacy and were more effective than the placebo in treating the symptoms of knee OA.

Keyword: Osteoarthritis; *Channa*; *Striatus*; Arthritis; Complementary; Biomarker