Management strategies for knee osteoarthritis: Aflapin® (*Boswellia serrata* extract)

Sir,

A recent article entitled "Management strategies for *Janu Sandhigata Vata* vis-a-vis osteoarthritis of knee: A narrative review" which was published in this journal is quite interesting and informative. The authors of this article have done extensive and thorough review of clinical trials from AYUSH Research Portal and PubMed database on the above subject. The authors have very well described various pharmacological, non-pharmacological and other interventions for managing osteoarthritis of knee. In addition, the role of *Shallaki* (*Boswellia serrata* Roxb.) in managing osteoarthritis has been described well. The authors have described that an extract of *Boswellia serrata,* 5-Loxin (containing 30% 3-O-Acetyl-11-keto-beta-boswellic acid [AKBA]), significantly inhibits 5-lipoxygenase enzyme activity thereby reducing pain and inflammation. 5-Loxin significantly reduces the cartilage degrading enzyme matrix metalloproteinase-3 (MMP-3) from synovial fluid of patients and prevents cartilage damage, thereby modifying the disease pathology. Aflapin® (novel synergistic composition of 20% AKBA enriched *B. serrata* non-volatile oil) showed better anti-inflammatory activity than 5-Loxin using various *in vivo* and *in vitro* animal models.[1] In addition, the authors could have cited another recent randomized double-blind, placebo-controlled study on Aflapin® in the management of osteoarthritis of knee from PubMed database. In this clinical study patients within the age group of 40–80 years of either gender suffering from unilateral or bilateral knee osteoarthritis were included. Standard assessment scales such as Western Ontario and McMaster Universities Arthritis Index scale for pain, stiffness and physical function; visual analog scale for pain assessment; and Lequesne's functional index were assessed and routine biochemical, hematological and urine analysis were done for safety assessment. In this clinical trial Aflapin® 50 mg twice daily significantly reduced joint pain as early as 5 days, reduced joint stiffness and also improved physical function of knee osteoarthritis patients with good safety profile.[2] Aflapin® is found to be a more efficacious anti-inflammatory agent compared to the existing *Boswellia* products, 5-Loxin, and traditional 65% *Boswellia* extract. Aflapin® showed better bioavailability, 5-lipoxygenase inhibition and MMP-3 inhibition, reduces inflammatory mediators (tumor necrosis factor-alpha, interleukin-1 beta and intracellular adhesion molecule) and improved glycosaminoglycan level, thereby reducing pain and inflammation, preventing cartilage damage and controlling disease progression more profoundly than 5-Loxin.[2,3] In clinical trial, also, Aflapin® showed better improvement in joint pain, stiffness and physical function compared to 5-Loxin.[4] This article would have been more comprehensive if such information is also integrated in the discussion.

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Nil.

Conflicts of interest

The authors are employee at Sundyota Numandis Group of Companies. All authors have declared that the current information provided is extensively reviewed from scientific databases such as PubMed and Science direct sources.

Manoj A. Suva, Dharmesh B. Kheni, Varun P. Sureja

Scientific and Medical Affairs, Sundyota Numandis Group of Companies, Ahmedabad, Gujarat, India

Address for correspondence: Mr. Manoj A. Suva, Sundyota Numandis Group of Companies, Ahmedabad - 380 015, Gujarat, India.
E-mail: manoj.s@sundyotanumandis.com

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