

Snake Venom - An Anti Arthritis Natural Product

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Arthritis, one of the major joint related diseases of the 21st century affecting senior citizens and a socio medical financial burden to the elder population of our country. The physiological consequences include pain, inflammation and joint tissue destruction, leading to restriction of movements of limbs and changed life style. The therapeutic management are well known (physiotherapy, NSAIDs, DMARDs, cytokine therapy etc) including their limitations [1]. The importance of alternative therapy in arthritis has been mentioned in the Indian traditional medicine system "Ayurveda". The age old practice of the use of snake (cobra) venom in arthritis has been established [2]. In Ayurveda, cobra venom was used to treat joint pain, inflammation, and arthritis. The Visachikitsa, the division of ayurveda deals with the use of venoms to cure diseases through ayurvedic technique known as suchikavoron (venom at the tip of a needle) and shodhono (detoxification of venom) was able to treat several chronic diseases [3]. The scientific basis of use of cobra venom as an anti arthritis agent has been recently reported [4]. This study confirmed that the Indian monocellate cobra (*Naja kaouthia*) venom significantly antagonised the changes in the arthritis bio markers in experimental animal model, where arthritis was induced by Freund's complete adjuvant. Anti arthritis activity of cobra venom (doses selected in terms of LD₅₀ values) was confirmed through physical parameters (paw and ankle diameter), urinary markers (hydroxyl proline, glucosamine), biochemical markers (acid & alkaline phosphatase), molecular marker (IL10), liver anti oxidant parameters (catalase, glutathione, etc.) and histopathological observations. This study revived the concept of treating of chronic diseases like arthritis by the ayurvedic techniques. With these observations, one can now go for detail study on the venom active constituents and their mechanism of actions at cellular and molecular level. It's time that Indian scientists should explore the Indian traditional medicine against chronic diseases, not only for health benefits but also for the preservation and documentation of our ancestral scientific knowledge and culture to make the world a better living place.

References

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Editor's remark: Reference 2 is the research work of Prof.A.Gomes published by the Discovery News. (*agomescu@gmail.com)