

Anti-arthritic activity of root bark of *Oroxylum indicum* (L.) vent against adjuvant-induced arthritis

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ABSTRACT

Background *Oroxylum indicum* (Bignoniaceae) also known as Sonapatha is an indigenous medicinal plant widely used in Ayurvedic medicine for over thousands of years. It is an active ingredient of well-known Ayurvedic formulations such as Chyawanprash and Dasamula. Root bark of this plant has tonic and astringent properties and it is also used in rheumatism. **Objective** The present investigation was carried out to evaluate the anti-arthritic activity of different extracts of root bark of *Oroxylum indicum* against adjuvant - induced arthritis in rats. **Materials and Methods** Male Wistar rats were used in this study. Arthritis was induced by injecting 0.1 ml Freund's complete adjuvant intra-dermally into the left hind paw of the rats. The paw volume, hematological, biochemical, radiographic and histopathological aspects were evaluated. **Results** The relative percentage inhibition potential of paw volume in rats treated with various extracts of *Oroxylum indicum* was found to be ethyl acetate extract (67.69%) >chloroform extract (64.61%) >n-butanol extract (58.46%) respectively. The hematological parameters like RBC count, hemoglobin content showed significant increase while there was a significant decrease in total WBC count and ESR in all the groups of animals pretreated with root bark extracts. The biochemical parameters such as catalase, glutathione contents showed a significant increase while the lipid peroxide and Cathepsin-D content decreased significantly only in case of ethyl acetate pretreated rats when compared to others. **Conclusion** The present study suggests that the chloroform, ethyl acetate and n-butanol extracts of root bark of *Oroxylum indicum* exhibit anti-arthritic activity. The order of activity of extracts was found to be ethyl acetate >chloroform >n-butanol respectively.

KEYWORDS

Anti-arthritic activity . biochemical parameters . Freund's complete adjuvant . histopathology . *Oroxylum indicum*

REFERENCES