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Anti-inflammatory and analgesic activity of *Habbe Gule Aakh*, A polyherbal Unani formulation in animal modelsB. Ganga, Abdul Wadud^{* 1}, Nasreen Jahan, Shaikh Ajj Ahmed Makbul

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ABSTRACT

Background: *Habbe Gule Aakh* is extensively used in Unani medicine for anti-inflammatory and analgesic activity.

Objective: To evaluate anti-inflammatory and analgesic effects of *Habbe Gule Aakh* on Wistar rats and Swiss mice of either sex.

Materials and methods: The study was carried out in Wistar rats for anti-inflammatory activity while Swiss mice were used for analgesic activity. In both the tests animals were divided into five groups of six animals each which served as control, standard and test groups A, B and C. For anti-inflammatory activity, method reported by Amman was followed. For analgesic activity, Koster's protocol was adapted.

Results: Significant ($P < 0.01$) reduction in the paw volume was noted in all the test groups but less than the standard drug. Mean writhes of group B and C reduced significantly ($P < 0.01$) demonstrating analgesic effect.

Conclusion: The study validated the claim of Unani medicine of use of *Habbe Gule Aakh* in inflammation and pain. Further, phytochemical studies are needed to know the exact mechanism of action of this formulation.

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1. Introduction

Inflammation and pain are commonest manifestations of many diseases [1]. Inflammation is a nonspecific response that has a beneficial effect on the host [2]. Pain is physical discomfort caused due to illness or injury [1]. Conventional management of inflammation and pain includes varied groups of drugs; of them Non-steroidal anti-inflammatory drugs (NSAIDs) are the most commonly used anti-inflammatory and analgesic drugs. These drugs block prostaglandin synthesis and inhibit lipoxygenase and superoxide radical production, affect neutrophil aggregation and adhesion, cytokine production and cartilage metabolism etc. [3]. Anti-inflammatory, analgesic and antipyretic actions are due to a common mechanism, that is, inhibition of COX-2 and COX-1, however, simultaneous inhibition of COX-1 result is unwanted side effects [4].

In Unani medicine, inflammation has not been described as has been in conventional medicine. However, a term *waram* (swelling) mentioned in Unani medicine referring to any abnormal swelling, be it due to accumulation of blood, pus, water and flatus, may be considered as a term nearest to inflammation to some extent especially when it is *har* (acute). But, *waram*, a general term including all types of abnormal swellings, should not be exactly correlated with modern concept of inflammation; instead, inflammation may be considered as a type of *waram* [5]. In Unani medicine, management of *waram* varies according to the nature and presence of matter e.g. hot, cold, hard etc. It also depends on organs in which swelling has occurred. Unani Medicine claims many single and compound drugs for reducing inflammation and pain. Many single as well as compound drugs are in use as *Mohlil-e-waram* (anti-inflammatory) as well as *musakkin* (analgesic).

Habb (pill) is a dosage form of Unani medicine. It is round, small, uniformly shaped, of different sizes e.g. pea, gram, black pepper etc. *Habbe Gule Aakh* (HGA) is extensively used in Unani medicine in the management of inflammation and pain [6]. Some of its ingredients (Table 1) are said to be anti-inflammatory and are used in arthritis and other painful conditions [6,7]. The ingredients of this

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