WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.074
Volume 7, Issue 6, 953-956. Research Article ISSN 2277– 7105

A CLINICAL STUDY ON THE EFFICACY OF *GLYCYRRHIZA GLABRA* LINN IN THE MANAGEMENT OF CHRONIC BRONCHITIS

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Article Received on
25 Jan. 2018,

Revised on 15 Feb. 2018,
Accepted on 08 March 2018

DOI: 10.20959/wjpr20186-11484

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ABSTRACT

Chronic bronchitis is defined as a disease characterized by hyper secretion of mucus sufficient to cause cough and sputum on most days for at least three months in a year for 2 or more consecutive years. Chronic bronchitis occurs most commonly in adult males. Considering this unconvincing scenario regarding the use of drugs in chronic bronchitis and side effects thereof, researchers pursued the test drug of turning to nature and the traditional pathies.

KEYWORDS: *Chronic bronchitis, Glycyrrhiza Glabra* Linn, *traditional pathies.*

INTRODUCTION

Epidemiologically, chronic bronchitis has been defined as cough and sputum production for ≥3 months in each of least two consecutive years.[1] It is characterized by hyper secretion of mucus sufficient to cause cough and sputum on most days for at least three months in a year for 2 or more consecutive years. This happens in the absence of any other specific respiratory or cardio vascular disease.[2,3] The concept of chronic bronchitis (*Iltehab-e-sho'b muzmin*) in Unani System of Medicine is, that it is a condition caused by viscid humours (phlegm) passing through trachea & lodging in lungs culminating in irritation of mucus membrane of bronchioles.[4,5]

The modern medicines used for chronic bronchitis may have drug toxicity; hence it has its limitations and therefore cannot be used for longer duration. Unani drugs are much safer and cost effective than modern medicine therefore can be used safely for longer duration. We have planned to evaluate clinically expectorant & demulcent activity of a single Unani drug named *aslussoos (Glycyrrhiza glabra Linn)*. Unani medicine axiomatically comes to the fore

as the chronic bronchitis has successfully been treated since ancient time without considerably obnoxious side effects on the body.[6]

Prevalence of chronic bronchitis varies among population in India. Dutta *et al* reported a prevalence rate of 2.7% of chronic bronchitis among women in Central India. The authors concluded that factors like older age, presence of a cattle shed within their house premises, storage of fertilizers inside house, history of allergy, past history of pulmonary tuberculosis emerged as significant correlates of chronic bronchitis.[7] While Joshi *et al* stated the prevalence of chronic bronchitis as 12.5 percent in an industrial population in North India.[8]

METHODOLOGY

The study was conducted on 30 patients. The study duration was 30 days. In the study 34 patients were registered out of which 30 patients completed the therapy protocol. Patients were selected on the basis of clinical diagnosis. Patients giving history of chronic cough for 3 months during each of the two successive years with the FEV1 / FVC <80% were selected. The drug was authenticated by expert botanist and used in powdered form as mentioned in old classical Unani literature.

RESULTS

Cough was assessed and graded as severe, moderate, mild and absent and was coded as 3, 2, 1 and 0 respectively. On zero day, we had 53.3% patients with complaint of severe cough and 46.7% with moderate cough complaint. On the 15th day of the treatment, we had 6.7% patients at grade-0, grade-1, 53.3% and 40% with grade-2 cough complaint. We had significant decrease on 30th day of treatment with 70% having no cough while 20% and 10% reported with grade-1, grade-2 cough.

Sputum production was assessed and graded as severe, moderate, mild and normal and was coded as 3, 2, 1 and 0, respectively. Sputum production on zero day was reported as grade-2 (63.3%) and grade-3 (36.7%). On 15th day of treatment, 70% reported with grade-1, 30% with grade-2 sputum production and then on 30th day there was a significant decrease with 80% reporting grade-0, 16.7% grade-1 and only 3.3% grade-2 sputum production.

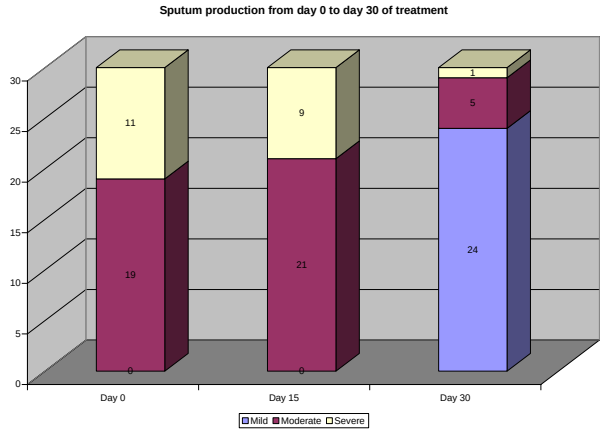

Fig. 1.

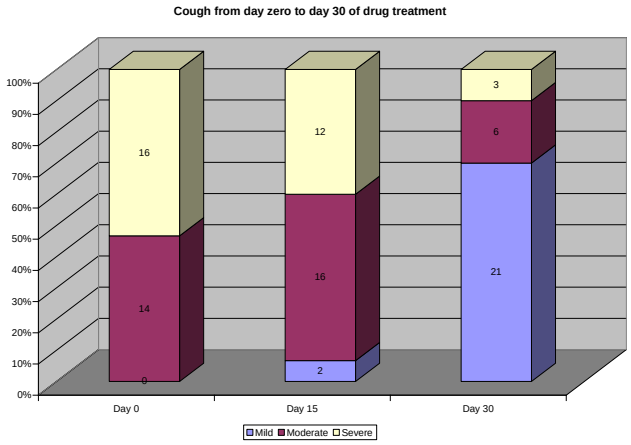

Fig. 2.

Similarly on the parameter of breathlessness, significant results showed up with 73.3% having no complaint of breathlessness, grade-1 (20%) and grade-2 (6.7%) after 30 days of treatment in comparison to reporting of grade-3 (43.3%) and grade-2 (56.7%) of breathlessness. The drug also proved effective in reducing the wheezing. There was a marked decrease in wheezing as on day 30 of treatment 86.7% patients did not have wheezing while on day zero mild wheezing was reported in 56.7%, moderate wheezing in 26.7% and severe in 3.3% of the patients.

DISCUSSION

Chronic bronchitis may be simple with mucoid expectoration, muco-purulent with present or intermittent muco-purulent expectoration or obstructive with persistent widespread narrowing of airways and increased resistance to airflow during expiration.[9,10,11] The drug used in the trial possesses *Muhallil* (anti-inflammatory), *Munaffis* (expectorant) and *Mulatiff*

(demulscent) properties. Due to these properties, the inflammation in the respiratory tract is controlled and the consistency of mucus is modified to enable it to expectorate easily. It decreases the inflammation and thus, stops further production of sputum leaving the respiratory pathways clear.[12] Thus it can be concluded that Unani drug *aslussoos* (Glycyrrhiza *glabra Linn)* is effective in the management of chronic bronchitis.

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