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A Literature Review of Luk Maghsool (Lac)

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ABSTRACT

Luk Maghsool (Lac) is the resinous secretion of a number of species of lac insects, of which the most commonly cultivated is *Kerria lacca*. Cultivation begins when a farmer gets a stick that contains eggs ready to hatch and ties it to the tree to be infested. 1 Thousands of lac insects colonize the branches of the host trees and secrete the resinous pigment. The coated branches of the host trees are cut and harvested as sticklac. The harvested sticklac is crushed and sieved to remove impurities. The sieved material is then repeatedly washed to remove insect parts and other material. The resulting product is known as seedlac. The prefix seed refers to its pellet shape. Seedlac, which still contains 3–5% impurity, is processed into shellac by heat treatment or solvent extraction. The use of lac since ancient times in different alternative system of medicine like Unani, Ayurveda etc. for the treatment of Obesity (Saman-e-Mufrat), Dyslipidaemia (Fart-e-Tadassum-Fid-Dum), Liver disease (Amraz-e-Jigar), Anti-helminthic (Deedan-e-medad wa amma) etc. Several studies have been carried out for the therapeutic evaluation of its efficacy and safety. So, I want to compile and summarized all the literature at one space.

Keywords: Luk Mughsool, Saman-e-Mufrat, Fart-e-Tadassum-Fid-Dum, Amraz-e-Jigar, Deedan-e-medad wa amma

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INTRODUCTION

Lac is a scarlet resinous secretion of a number of species of insect, deposited on the twigs of trees such as banyan, croton, acacia and peepal by a small insect called *Criteria lacca*. Lac is a reputed drug of biological origin claimed to possess weight lowering effect. It has been mentioned by ancient scholars such as Hippocrate (460BC), Deoscoridus (78AD) Galen (IInd AD.), Razi (9th AD), Avicenna (980-1037 A.D.) in their books^{1,2,3}.

MATERIALS AND METHOD

Review material collected from the different ancient Unani books, PG Dissertation, online authentic research Journals & different websites and summarized with the help of computer.

DRUG REVIEW

Description in Unani literature:

There is controversy among the ancient Unani scholar about the origin of this drug. *Deoscoridus* (78A.D.) described this drug as *qaiqahan*: in his book *Kitabul-Hashaish*¹, about *Ghani* (1917) reported that *Qaiqahan*⁴. Described by *Deoscoridus* is Lac.

- *Folas* reported that it is a Gum of plant.
- According to *Masorjoya* (857 C.E.) description of *Qurmuz* is quite similar to the Lac described by *Deoscoridus*, therefore, the *Qormuz* is actual Lac.
- Some Unani physician reported it the synonyms of *Koharba*.
- According to some Unani physician Lac falls on the plant of grape, and accumulates as gum.
- Some physicians described it be dew fall on trees and accumulate as gum.
- *Ghani* (1974) described that it is a substance deposited on the twigs of trees such as banyan, croton, accacia and peepal by insect called *criteria lacca*⁴.

Synonyms:^{5,6,7,8}

| | |
|-----------|-------------------|
| Persian | : Lac |
| Bengali | : Gala |
| Arabic | : Luk, Luc |
| Guajarati | : Laac |
| Hindi | : Lakh |
| Telgu | : Komoleka |
| Sanskrit | : Salaji, Lakhsha |
| Tamil | : Kambarki |
| English | : Lac |

Marathi : Lakh

Malayalam : Lakhsha

Kanada : Aragn

Botanical Description:

Lac is a resinous substance usually of a reddish or dark brown colour with a disagreeable smell and easy breakable, deposited on the twigs of trees such as banyan, croton, acacia and peepal by a small insect called *Criteria lacca*. Lac is resinous protective secretion of the Lac insect, which is pest on a number of different plants, both wild and cultivated, the minute red coloured larvae of the insect settle on young succulent shoots of the host plant in myriads, drive their long proboscis into the bark and draw their nutrition from the sap. They secrete a thick resinous fluid which envelopes their bodies and forms a hard-continuous encrustation over the twig. After the completion of the life cycle, the larvae of the next generation begin to emerge the twig are harvested, and the encrustation scrapped off, and dried and processed to yield the Lac ^{5,7,9}.

Habitat and Distribution:

The commonest and most widely occurring species of Lac insect in India is "*Laccifer lacca*" species of the genus have been recorded in India⁷⁴. Some of the species found in India also occurs in other countries. Lac is abundantly found in Bengal and Assam, the North West provinces and the central provinces, Punjab, Bombay and Madras. In India the best Lac is obtained from Assam. In Bengal Lac gathered twice a year viz. from middle of the October to the end of January, and from middle of May to middle of July ^{5,6,10}.

Chemical Constituents:

Lac consists of Resin 68%, colouring extract 10%, wax 6%, gluten 5.5%, and extraneous substances 6.5%. Dr. John gives more elaborate analysis and odorous common resin 80%, a resing insoluble in ether 20%, colouring matter analogue to that of coclineal 4.5%, butter balsome matter 3%, yellow extract 0.5%, lactic acid 0.75%. Other constituents of Lac are sugar, Protein, and volatile oil present in traces. Lac also contain water soluble red dye, laccic acid, alkali and spirit soluble yellow dye, erythrolaccin. Lac resin molecular wt. 1000, acid value 59-97, hydroxyl value 255-280, Aleuric acid, trichyoxo palmitic acid and C₁₆ H₃₂ O₅ is the Major constituents. The wax present in Sticlac is usually obtained as a byproduct. The analytical constants of wax fall following ranges. M.P 72-80 CO, D 15, 50, 0.971, 0.982, acid value 12.0-24.3, sap value 79-126, esters (cerylligenocerate, ceryl, cerolate, laceryl laccerol, ceryl aleuritate) acids (lacceroic cerotic) 10-14, alcohol (neoceryl, lacceryl), hydrocarbons (pentacosane, heptacosane) 2-6 and resin 2-4%⁵.

Mizaj:

In Unani literature there is a controversy among the Unani physicians regarding the “mizaj”.

Hot and dry in 2nd degree^{11,12}.

Hot 2nd and dry 3rd degree^{7,8,13}.

Part used: Resinous secretion

FUNCTIONS AND USES

Muhazzil (Weight Reducing Agent), Munaffis wa Mukhrij (Expectorant), Tiryaaq-e-Samoom (Alexipharmic), Muhallil (Resolvent/Muhallil), Mufatteh (Desiccative), Munzij (concoctive), Mujaffif (Astringent), Jali (Detergent), Qatile-deedan (Anthelmintic), Ra'de (Deobstruent), Muqawwi-e-Medah-wa-Jigar (Liver and Gastro tonic), Musaffi-e-Dum (Blood purifier), Muqawwi-e-Bah (Aphrodisiac), Emollient and Ma'ne hamal (Antifertility)^{3,7,9,11,13,14,15,16}.

Therapeutic Uses

Lac is an important drug used for weight loss. Most of the Unani physicians reported that when Lac is taken with vinegar it reduces the weight significantly^{5,7,11,13,17}. A decoction of Lac is much used in Hindu medicine for preparation of several medicinal oil such as lakshdi taila, Chandnidi taila, and Angaraka taila¹⁸. Lac is used in enlargement of liver, ulcer and also in form of varnish as application to wound. Its decoction mixed with 4 seers of prepared Sesamum oil, 16 seers of whey, and 2 tolas of each of the following substances, Withania somnifera, turmeric, Devadru wood, Root of Sansavera Zeylinica, Pandanus Adoratisimus, Vanda Roxburghi, Dill seeds and Liquorish root, prepare an oil in usual way, lastly added 4 tola of camphor, this oil is much used for inunctions in chronic fever and is applied to the chest in remittent fever accompanied by cough and dyspnoea, also used in lumbago, myalgia, epilepsy, paralysis, hysteria⁶. It is used in Jaundic^{7,12}. It is also useful in patients of Bell's palsy, paresthesia, cold pains and other complaints arising due to cold humours and due to accumulation of viscid matter¹⁹. Recently antifertility activities (anti-ovulatory, anti-implantation and estrogenic activities) of *Laccifer lacca* reported by Aisha *et al.*¹⁶

Dose: ½ grams – 2grams^{3,8,12,20}.

Adverse Effect: Splenic diseases^{3,8,13}.

Alternative: Tabasheer^{3,8}.

Corrective: Mastagi^{3,8,13}.

Important Formulations:

Safoof-e-Mohazzil, Qurse Koherba, Majun Dabidul Ward^{3,7,21}

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