SYSTEMATIC REVIEW ON GHUNGCHI SAFAID (ABRUS PREATORIUS) SEEDS

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ABSTRACT

Ghungchi safaid (Abrus precatorius) is commonly known as Gunja or Jequirity belonging to Fabaccae- a pea family, richly found throughout plains of India, from Himalaya down to Southern India and Sri lanka. It is a semi poisonous medicine mentioned among higher degree of hot & dry temperament which is used in various diseases topically and considered as contraceptive internally in Unani System of medicine. The present review represents the classification, habitat, etymology, pharmacological actions, therapeutic uses, unwarranted effects and correctives along with pharmacological studies.

INTRODUCTION

Abrus precatorius is an ornamental, twining, woody vine which grows to a height of 10 to 20 feet when supported by other plants (1). The branchlets of the plant of Abrus precatorius are glabrescent. Its leaves are evenpinnate, leaflets are 9-12 in pair, opposite and oblong in shape. The flowers of Abrus precatorius are sub-sessile, wide, and compact on cushion like nodes, petals are rose to pink in colour. The pink colour flowers produce red and black coloured seeds whereas white colour flowers produces white coloured seeds, having 5.2-5.5mm length and 2.7-3.7 mm width. The seeds are 3-6 in number, ovoid, and 7.5cm long scarlet with a black spot at the hilum and polished. The weight of single seed of red variety is 0.1498g (approx.) and white variety is about 0.13825g(2) (3).

Scientific classification

<table>
<thead>
<tr>
<th>Kingdom</th>
<th>Plantae–Plan</th>
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</thead>
<tbody>
<tr>
<td>Subkingdom</td>
<td>Tracheobionta (Vascular plants)</td>
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<tr>
<td>Super division</td>
<td>Spermatophyta (Seed plants)</td>
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<tr>
<td>Division</td>
<td>Magnoliophyta (Flowering plants)</td>
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<tr>
<td>Class</td>
<td>Magnoliopsida (Dicotyledons)</td>
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<td>Subclass</td>
<td>Rosidae</td>
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<tr>
<td>Order</td>
<td>Fabales</td>
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<tr>
<td>Family</td>
<td>Fabaceae / Leguminosae (Pea family)</td>
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<tr>
<td>Genus</td>
<td>Abrus Adans – abrus</td>
</tr>
<tr>
<td>Species</td>
<td>Abrus precatorius L.–rosarypea (4)</td>
</tr>
</tbody>
</table>

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Vernacular names and etymology

Arabic: Ainuddeek (5) (3)
Persian: Chashm Kharoos (5) (3)
Hindi: Ratti, Ghungchi (6) (5) (7) (3)
Bengali: Kunch, Shonkainh (6) (5)
Gujarati: Rati, Chanotee, Chonotee (6) (5)
Kannad: Guluganji, Gulagunja (6) (5) Gunji (7)
Tamil: Kunrimani, Kundumani (6) (5) (3) Gundumani (7)
Malayalam: Kunni, Cuvanna Kunni (6) (5)
Kakani (7) (3)
Marathi: Gunja (6) (5) (3)
Oriya: Kainch (8)
Punjabi: Ratti (5) (3)
Telugu: Guriginga, Gurivinda (5) (6) (7) (3)
Sanskrit: Gunja (6) (3)
English: Crab’s eye, Indian liquorice, Jequirityas (9) (10) (3)

Habitat and Distribution
Abrus precatorius Linn. (Fam. Papilionaceae); a climber, all along Himalayas ascending to 900 m, spreading throughout the country; flowering in August-September, fruits ripen during winter. It is also found in South China, the Pacific Islands and tropical Africa and West Indies(5) (11) (10).

Chemical constituents
Abrin, alanine, abrusin, abrusin-2'-0-apioside, abrusgenic-acid, abrusgenic-acid-methyl-ester, abrisapogenol, abruassic-acid, anthocyanins, Abruslactone, β-amyrin, calcium, campesterol, choline, cycloartenol, delphinidin, dimethoxycentaureidin-7-0-rutinoside, gallic-acid, glycyrrhizin, glucodelphinidin, hederagenin, hypaphorine, iron, methyl-ester, magnesium, N,N-dimethyl-tryptophan, N,N-dimethyl-tryptophan-methocation, p-coumaroylgalloyl pectin, pentosans, picatorine, polygalacturonic-acids, precasine, precatorine, potassium, phosphorus, sodium, serine, trigonelline, manganese, valine, zinc (1) (9) (10) (7) (3).

Temperament
- Hot 3' Dry 2' (12) (13)
- Hot 2' Dry 3' (14)
- Hot 2' Moist 1', (White variety) Hot 3'Dry2'(Red Variety)(15)
- Hot 3' Dry 3', (16) (17) (18)

Pharmacological Actions
- Jali (Detergent) (18) (19)
- Muhallil (Anti-inflammatory) (19)
- Akkal (Corrosive) (19)
- Muharrir-k-Bah (Aphrodisiac) (12)(19)(15)
- Muqawwi Aasab (Nervine Tonic) (12)
- Mowallid-e-Mani (semenogogue) (15)

Therapeutic Uses:
Locally
- Due to its anti-inflammatory nature it is applied over swellings (19).
- Its powder is applied along with linseed oil to cure acne and melasma(18) (17).
- It is applied in the management of vitiligo, and taenia (19).
- Aphrodisiac when applied locally in the form of Tila (18) (17) (12) (19).
- It heals wounds and piles(18) (19) (17).
- It is used in the management of cataract (18) (17).
- Application of oil obtained from seeds is aphrodisiac and a promising nerve tonic (12).

Internally
Although, its internal use is contra-indicated, few indications are mentioned in Unani literature(17) (18)
- Contraception: taking 1 seed after bleeding phase of menstrual cycle may prevent conception for 1 year (17).

Parts Used
Seeds, leaves, stem (17)

Therapeutic dose
Quantity sufficient for local application and internally 1-2g (12) (19) (13)

Unwarranted effects
Contraindicated in people with hot temperament and old aged people (19) (12), Headache (12), Vomiting and loose motions (17)

Correctives
Kishneez sabz (Green Corriander), (15) (12) (19), Turanjabeen (Camel thorn) (12) (19), Sheerah Akash Bel (Cuscuta juice), Lassi(Butter mlk), Doodh(Milk), (17)

Formulations
Zimad Muhasa (20) (21) Majoone Malooki, Majoone Hafiz al Sehat (12)

Pharmacological studies
- Anti-bacterial activity (22) (23)
Conclusion
It is clearly evident that most of the therapeutic uses of Ghunghi safaid seeds mentioned in classical Unani literature are in accordance with pharmacological studies which are conducted recently thus supporting its usage specifically in dermatology and sexology.

Bibliography


