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### ANJEER: NATURE'S GIFT OF BALANCED NUTRITION FOR HOLISTIC WELL BEING- A REVIEW

Dr Afifa Naaz<sup>1</sup>, Prof Wajeeha Begum<sup>1</sup>, Dr Shavana Fathima<sup>2</sup>

<sup>1</sup>National Institute of Unani Medicine, Kottigepalya, Magadi Road, Bangalore Karnataka, India-560091.

<sup>2</sup>Luqman Unani Medical College and Research Center, Vijayapura, Karnataka, India.

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#### ABSTRACT

*Ficus carica* linn, commonly known as fig belongs to family moraceae. It is an extensively used traditional medicinal plant with variety of therapeutic applications. It is most commonly found in Mediterranean region. It is typically of 15 to 20 feet tall deciduous tree. It is consumed both in dry and fresh form. It is not only used as a diet but also as a drug. Not only fruit but latex, bark and leaves also contains therapeutic benefits.

Method: The objective of this review paper was to emphasize the habitat, chemical composition, phytochemistry, and evidence-based research on Anjeer with a focus on traditional usage. The literature search included articles, scientific databases, and old unani literature books for traditional use, pharmaceutical applications, evidence-based research, and other topics.

Results: *Ficus carica* linn has a wide range of pharmacological activities supported by traditional uses and scientific research such as hepatoprotective activity, hypoglycaemic activity, antioxidant activity, anti-inflammatory activity, erythropoietic activity, anti-aging, anti-acne activity. It is full of phenolic compounds, organic acids, volatile compounds, amino acids, vitamins, minerals, carbohydrates. In traditional system of medicine it is considered as *kaseerulghiza* and is effective in constipation, skin diseases, spleen and liver disorders, wound healing, kidney bladder diseases, uterine diseases, improves intelligence as it possesses properties of *Mughazzi*, *Mulayyin*, *Muqawwi-i-Jigar*, *Muhallil-i-Waram*, *Muqawwi-i-Badan*, *Moarrique*, *Mudirr-i-Bawl*, *Muqawwi-i-Bah*, *Jali* and *mizaaj* of *garm o tar*. Conclusion: *Ficus carica* linn is an excellent nutritive source which can be used in different forms for various ailments due to its phytochemical constituents. However further research is needed to confirm its capability, mechanism of action for future clinical uses.

#### Corresponding author

Dr. Afifa Naaz

PG scholar

National Institute of Unani Medicine,

kottigepalya, Magadi road,

Bangalore Karnataka, India -560091.

Afifanaaz97@gmail.com

7026889148

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## INTRODUCTION

*F. carica* L. is an important member of the genus *Ficus*. It is ordinarily deciduous and commonly referred to as “fig”. The common fig is a tree native to southwest Asia and the eastern Mediterranean, and it is one of the first plants that were cultivated by humans.<sup>1</sup> Fig fruit finds mention in many religious texts including Bible and Quran. Quran mentions fig as the most soft, gentle fruit which is free from any harmful or indigestible component. Fresh fig is well known for its attractive taste and excellent nutritional composition.<sup>2</sup> Figs are commonly known as a fruit, but are actually a type of flower. There are four types of fig fruits, i.e., Caprifigs, Smyrna, San Pedro, and Common, with over 800 different fig varieties cultivated in almost 50 countries around the world.<sup>3</sup> *F. carica* trees are gynodioecious with two major sex types: the caprifig and fig types. Though caprifigs are hermaphrodite plants with both male and female blooms, they solely function as male plants because they can only bear pollen and not edible fruit. However, female blooms continue to be essential for artificial feminization or wasp pollination of some fig species.<sup>4</sup>

Turkey was the leading producer of figs (320,000 tons) in 2021, followed by Egypt (298,498 tons) and Morocco (144,153 tons) ranking second and third, respectively. The other fig producing countries that made the top 10 list in 2021 include Algeria, Iran, Spain, Syria, Uzbekistan, USA, and Albania.<sup>3</sup> As a seasonal fruit, figs establish a significant piece of the Mediterranean diet, either fresh or dried; figs are a particularly good source of fiber, minor elements, proteins, and carbohydrates making them a very nutritious fruit. These plants are viable in the treatment of diabetes, stomach-ache, piles, skin diseases, inflammation, cancer, kidney, and spleen diseases.<sup>5</sup> In addition to its high nutritive value, the different parts of the FC tree are largely used in folk medicine systems such as siddha, ayurveda and unani as a mild natural laxative, diuretic, expectorant agent, deobstruent in liver and spleen diseases, and as an anti-inflammatory agent.<sup>6</sup>

The present article is aimed to review the traditional uses in detail and evidence based research on Anjeer along with its habitat, ethnomedical use and pharmacological activities.

## MATERIALS AND METHODS

A comprehensive literature search was conducted using online resources such as PubMed, Google Scholar, Scihub, Science Direct, and other electronic databases to gather relevant information about Ajwain. Additionally, standard literature books on Unani medicine published in both Urdu and English were consulted to compile the information.

### Taxonomical classification:<sup>7</sup>

- Kingdom - Plantae
- Division - Magnoliophyta
- Class - Magnolipsida
- Order - Rosales
- Family - Moraceae
- Genus - *Ficus*
- Species - *F. carica*

### Vernacular names:<sup>8</sup>

- English - Common fig tree, fig
- Hindi - Anjeer, anjir, tin
- Sanskrit - Angira, anjeer, anjir, anjira, phalgu, rajodumbara, udumvara
- Bengali - Dumur, tin
- Arabic - Anjir, teen, teenbarchomi
- Pakistan - Faag, anjeer, injir, baghi, inzar, anzar, anjir
- Nepal - Anjir
- Chinese - Mo faguo, wuhuaguo
- Unani - Anjir, suiko<sup>9,10</sup>
- Siddha / tamil - Semaiatti<sup>11</sup>
- France - Figue
- Dutch ,german - Feigs
- Italy - Fico
- Ibrani - Teenah<sup>10</sup>

### Mahiyath:

The plant is almost 6-10 or 12 feet long. It is of 2 types. One is rough which is referred as *jungle* and another one is *kaashkiahua* that is farmed.<sup>10</sup> Plant is average in height, leaves are broad, branches filled with milk/secretions, flowers are absent.<sup>12</sup> Taste is sweet and delicious, similar to *gularkaphal* in appearance.<sup>13</sup> Unraw fruit is green in colour whereas raw fruit becomes reddish brown or purplish and taste is *shireen* or sweet.<sup>10</sup>

**Mizaj/temperament:**

*Garm oSardMotadil*

According to Hakeem Kabeeruddin, *garm o tar*

In Mokhzanuladvia it is stated to be *garm* in first degree and *tar* in second degree

In Tibbi pharmacopeia it is mentioned as only *garm o tar*<sup>10</sup>

Fresh fruit is *garm* first degree and *tar* second degree

Dry fruit is *garm* second degree and *tar* first degree<sup>9,12</sup>

And its milk is extremely *garm* in *mizaj*<sup>12</sup>

**Pharmacological Actions (Af'aa):**<sup>14</sup>

*Mughazzi* (Nutritive) (Fattening Agent)

*Mulayyin* (Laxative)

*Mulattif* (Demulcent)

*Kasir-i-Riyah* (Carminative)

*Mundij*(Decoctive)

*Mushil*(Purgative)

*Muqawwi-i-Jigar* (Liver Tonic)

*Muhallil-i-Waram* (Anti-inflammatory)

*Muqawwi-i-Badan* (General Tonic)

*Munaffis-i-Balgham* (Expectorant)

*Moarrique* (Diaphoretic)

*Daf-i-Bukhar* (Anti-pyretic)

*Mudirr-i-Bawl* (Diuretic)

*Muqawwii-i-Bah* (Aphrodisiac)

*Jali* (Detergent)

*Muwallid-i-khoon*(Erythropoetic)<sup>15</sup>

**Istemaal/uses:**

➤ Anjeer is *sareeulhazm*<sup>10</sup> and *kaseerulghiza*<sup>12,13</sup>

➤ Its decreases the viscosity of blood

➤ Because of its *garm tar mizaj*, it acts as *mundij*

➤ It brings perspiration and cools down body temperature

➤ Its milk breaks down collected milk and blood in body<sup>10</sup>

➤ Because of its *hararath*, *rutubath* and *latafath* it helps in healing wounds<sup>10,13</sup>

➤ It is beneficial in chronic cough<sup>10</sup>

➤ It acts as diuretic<sup>10,12</sup>

➤ Eliminates blockages in liver and spleen<sup>10,12,13</sup>

➤ It is beneficial for kidney and bladder diseases

➤ Relieves constipation<sup>10</sup>

➤ Because it is *muarriq*, transports *fuzlath* towards skin that's why it brings out the eruptions of chicken pox, small pox and measles on skin<sup>10,13</sup>

➤ It provides *taqwiyyat to bah* when consumed with *moghzakhrot*<sup>10,12,13</sup>

➤ It is beneficial as *zimad* in lymphnode enlargement<sup>10,12</sup>

➤ It is good as *majoon* in warm *Rahim-o-miqad* and *bawaseer*

➤ Because of its *jali* property it is beneficial in skin disorders such as leucoderma<sup>10</sup>

➤ Beneficial in *sara* and *falij*<sup>12</sup>

➤ Helps in weight gain<sup>12,13</sup>

➤ Increases intelligence with almond and pistachios<sup>12</sup>

➤ Beneficial in *nuzoolul ma*<sup>12</sup>

➤ Lightens skin colour<sup>13</sup>

**Miqdarkhurak/Dosage:** Fruit:10-20ml juice; 5-10g paste<sup>11</sup>

2-3 *adad*<sup>13</sup>

5-10 *adad*<sup>12</sup>

2-3 *daaney* are enough in *sharbat* or *joshanda*

Dry fruit-2-3 piece

Effective till 2 years<sup>10</sup>

**Muzir/Adverse effect:**

According to Tibbipharmacopeia, liver<sup>10,12,13</sup> stomach<sup>10,12</sup> and intestine<sup>10</sup>  
Excessive intake can harm teeth<sup>12</sup>

**Musleh/Corrective:** *Sikanjabeen*,<sup>10,13</sup> *sharbatturanj*, *anisoona*, *satarfarsi*, *badamshireen*<sup>10</sup>

Dry fruit- *akhrot*, *satar*, *anisoona*

Fresh- *sikanjabeen*, *sharbatanisoona*<sup>12</sup>

**Badal/substitute:** *maveezmunaqa*<sup>10,12,13</sup> *moghzchalgoza*<sup>10,12</sup>

**Nafaekhaas:** skin diseases<sup>10,13</sup>

*Mulayyin*, *mudirr-i-Bawl*, *damma*, *suaal*

Lightens skin colour, helps in weight gain

Beneficial in diseases of spleen<sup>10</sup>

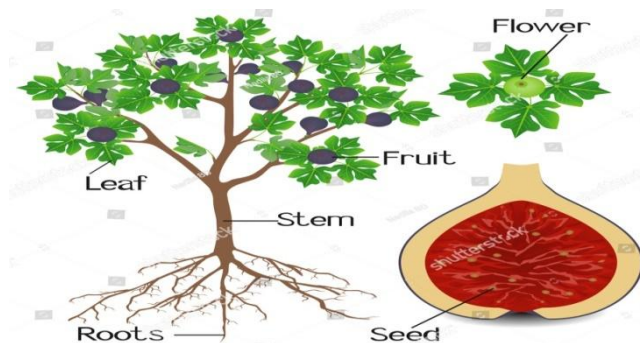
**Murakkbath/compound formulations:** *Sufoof-e-Bars*, *Zimad-e-Kibreet*<sup>14</sup>**Habitat:**

Fig is distributed in Southwest Asia and the Eastern Mediterranean region, from the Turkey in the East to Spain and Portugal in the West; it is also grown commercially in parts of U.S.A. and Chile and to small extent, in Arabia, Persia, India, China and Japan. It is cultivated in India commercially at few centers near Pune (Maharashtra) and Bellary and Anantpur districts (South India). In Punjab, Uttar Pradesh and Mysore, it is mostly grown scattered in gardens or in homeyards.<sup>14</sup> Fig tree, a deciduous sub-tropical tree, prefers arid or semi-arid environment, light summer temperature, plenty of sunlight and moderate water. Fig trees can grow in a variety of soils ranging from light sand to rich loam, heavy clay or lime stone. Although, fig trees are raised from seeds, the common practice of fig trees propagation includes cutting of mature wood (2–3 years of age) into ½–2/3 inch (1.25–2 cm) thick and 8–12 in (20–30) long rootstocks. Cuttings are taken in February and planted in nursery. They attain a height of 1 m (3 ft) when ready for transplant. Planting of these should be carried out immediately within 24 h of cutting.<sup>2</sup>

**Ethnobotanical description:**

*Ficus carica* is typically of 15 to 20 feet tall deciduous tree with numerous spreading branches. The full fruit is 3-5 centimeter long with the green skin that sometimes ripened towards purples or brown. The milky sap found in figs is created by laticifer cells. White latex is released when the fig plant's leaves and stems are broken. When figs are born singly or in pairs, they are referred to as syconia. The inflorescence structure encloses the male and female components. Because of the fruit, female flowers are considered.<sup>16</sup> The leaves are oval in shape, the below surface is pubescent, above surface is rough and contain 3–5 lobes. *FC* leaves are being used in the form of either tea or medicine.<sup>17</sup>

The Flowers are tiny and unnoticeable. Seeds may vary in size to large, medium, small or minute. The bark of the tree is smooth. The outer bark of the common fig tree is silvery gray or ashen, exfoliated with asymmetrical rounded flakes. The center bark section is brownish or light brown in color. The inner part is of sunshine yellowish color with granular tissue. The shape of fig fruit is ovoid, turbinate, pear-shaped. It's 1-4 inch long and varies in color from yellowish-green to coppery, bronze or dark-purple. The unique feature of fig is that they have a gap called 'eye' or "ostiole".<sup>16</sup>



**Fig 1: parts of a fig plant.**

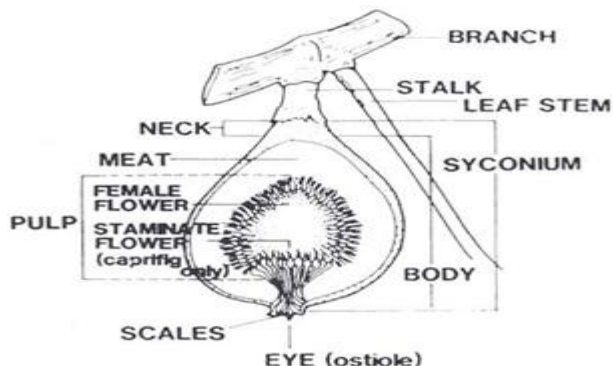


Fig 2: Diagram of a fig fruit<sup>18</sup>.

#### Microscopic description:

Transverse section of leaf Lamina: Upper epidermis with elongated large cells, single layered; below the epidermis mesophyll with 2-3 layered palisade cells, spongy parenchyma loosely arranged lower epidermis with elongated cells but cell size was smaller as compared to upper epidermis, capitate secretive trichomes on lower epidermis. Trichomes were both glandular and nonglandular type noted. Stomata present on abaxial surface and absent on adaxial surface. Midrib: Cuticle thin, upper epidermis with single layered papillose cells, below that collenchyma cells forms 7-8 layers, simple parenchyma loosely arranged, vascular bundles form incomplete ring like structure, in central portion some phloem patches with conjunctive tissue, surrounded by xylem, lower epidermis was as same as upper. Large trichomes were noted both on lower and upper side, trichomes were unicellular nonglandular and glandular type. Crystals were present in large quantity in ground tissue, in vascular bundles and pith region. Many latex ducts recorded in ground tissue.<sup>19</sup>

#### Macroscopic:

*Ficus carica* is a deciduous tree or large shrub that grows up to 7–10 m (23–33 ft) tall, with smooth white bark. Its fragrant leaves are 12–25 cm (4+1/2–10 in) long and 10–18 cm (4–7 in) wide, and are deeply lobed (three or five lobes). Dried fruits of *Ficus carica* Linn are compressed to a circular shape with a central hole 4-6 cm. in diameter, 1 cm thick. Surface of the fruit is wrinkled and light yellow to brown in colour. The fruit contains many small seeds in pulpy mesocarp.<sup>14</sup>

#### Traditional uses:

*F. carica* has been traditionally used for its medicinal benefits as metabolic, cardiovascular, respiratory, antispasmodic, and anti-inflammatory remedy. Leaves, fruits, and roots of *F. carica* are used in native medicinal system in different disorders such as gastrointestinal (colic, indigestion, loss of appetite, and diarrhea), respiratory (sore throats, cough, and bronchial problems), inflammatory, and cardiovascular disorders. Fruits of *F. carica* can be eaten fresh or dried or used as jam. It is also reported that figs have been conventionally used for their therapeutic benefits as laxative, cardiovascular, respiratory, antispasmodic, and anti-inflammatory remedies.

The fruit's juice of *F. carica* mixed with honey is used for haemorrhage. In Indian medicine, fruits are used as a mild laxative, expectorant, and diuretic. It is used as aid in liver and spleen diseases. The dry fruit of *F. carica* is a supplement food for diabetics. It is commercialized in the market as sweet due to its high level of sugars. Fruit paste is applied to swellings, tumours, and inflammation for relieving pain.<sup>1</sup>

Traditional medical practices have mostly focused on the treatment of dermatological conditions with fig products.<sup>20</sup>

#### Chemical constituents:

It is a rich source of proteins, amino acids, carbohydrates, minerals, vitamins and fibres. In addition, it being a highly nutritious fruit, is rich in calories and carbohydrates, lipids, phenolics and enzymes. Fig fruit has a nutritive index of 11, which is higher than Apple (9), Resin (8), and Date (6). Furthermore, dried figs are concentrated source of various nutrients and thus are often referred to as Poor Man's diet in Mediterranean Countries.<sup>2</sup> Phytochemical studies on raw materials (fruits and leaves) and derived products (wine, liqueur, and spirit) of *F. carica* revealed the presence of numerous bioactive compounds including volatiles, organic acids, phytosterols, triterpenoids, fatty acids, phenolic acids, flavonoids, coumarins, and few other classes of secondary metabolites.<sup>21</sup> Various constituents in different parts of the plant are mentioned below.

**Table 1: Chief ingredients of *F. carica*<sup>22</sup>.**

Partsof <i>F. carica</i>	Constituents
Fruits	Cyanidin-3-O-glucoside,cyanidin-3-Orhamnoglucoside,saturatedfat,cholesterol,sodium,insolublesugars,protein,vitaminA,vitamin C, calcium, iron
Ripedriedfruit	Alkaloids,flavonoids,coumarins,saponinsandterpenes
Dried seeds	Fixedoilincludingfattyacids
Leaves	Furanocoumarinsincludingpsoralen,bergapten,xanthotoxin,triterpenessuchascalotropenylacetateandL upeolacetate
Leaves	3-O-and5-O-caffeoylquinicacids,ferulicacid,quercetin-3-O-glucoside,quercetin-3-O-rutinosideandpsoralen

**Pharmacological studies:**

The pharmacological actions are discussed in table 2 below<sup>23</sup>

**Tab 2: pharmacological activities.**

Benefits	Mechanism and impacts	Reference
Antioxidant activity	Theleavesextractsof <i>F. carica</i> mayamelioratehyperglycemia,hyperlipidaemiaand antioxidant status in diabetic rats.	Allahyariet al. (2014) BachirBeyet al. (2014) TuranandCelik(2016) Belguith-Hadricheet al. (2017) SedaghatandRahemi(2018)
Anti-inflammatory activity	The fruit paste is applied to swelling and inflammation for relieving pain.	Guarrera(2005) Mawaetal.(2013)
Anticancer activity	A mixture of 6-O-acyl- $\beta$ -d-glucosyl- $\beta$ -sitosterols has been iso-lated as an effective cytotoxic agent from fig latex which showed <i>invitro</i> inhibitory effects of on proliferation of various cancer cell lines. <i>F. carica</i> leaf extract had a higher anticancer activity compared with its fruit extracts.	Rubnovet al. (2001) Yanchevaet al. (2005) Zhang et al. (2018) Purnamasariet al.(2019)
Anti-diabetic activity	The leaves of <i>Ficus carica</i> L. used to cure diabetes, and can be used as additive source in nutraceutical and biopharmaceutical industries.	Khan et al. (2011) Mopurietal.(2018)
Alzheimer'sdisease	The dietary supplementation of figs may be useful for the improvement of cognitive and behavioral deficits in Alzheimer disease.	Subashetal.(2016)
Hypoglycaemic activity	<i>Ficus carica</i> extract showed a clear hypoglycaemic effect in diabetic rats.	Perezetal.(2000)
Anti bacterial and anti fungalactivity	The combination impacts of methanol extract with ampicillin or gentamicin were synergistic against oral bacteria which showed that figs could act as a natural antibacterial agent. Hexane,chloroform,ethylacetate,andmethanolextractof <i>F. carica</i> latex showed antimicrobial activities.	Jeonget al. (2009) Arefetal. (2010)
Antimutagenic	Its plant extract verified the ability to decrease the genotoxicity of environmental mutagens.	AgabeiliandKasimova(2005)
Nematicidal activity	The leaf extract of <i>F. carica</i> showed the strongest nematicidal activity.	Liu et al.(2011)

**Antihypertensive effects:**

Alamgeer *et al* in their study demonstrated that aqueous methanol extract of *F. carica* fruit exerted hypotensive and antihypertensive effects in glucose-induced hypertensive rats.<sup>24</sup>

**Effect in constipation:**

The effects of fig paste in constipation was studied in loperamide-induced constipation in a rat model. Fecal pellet number, weight and water content were increased in the fig-treated groups as compared to the control group. Increased intestinal transit length and reduced fecal pellet number in the distal colons were also recorded in fig-treated rats. Exercise and ileum tension was increased in the treated groups as compared to the control group. A randomized, double-blind, placebo-controlled trial was carried out to investigate the efficacy of supplementation with *Ficus carica* paste in constipation. Subjects with functional constipation were orally supplemented with *Ficus carica* paste for 8 weeks. Primary outcomes (colon transit time) and secondary outcomes (questionnaire related to defecation) were compared before and after the 8-week intervention period. *Ficus carica* paste supplementation was associated with significant reduction in colon transit time and significant improvement in stool type and abdominal discomfort compared with the placebo. Blood parameters and clinical findings for organ toxicity remained within normal ranges.<sup>25</sup>

**Hypolipidemic activity :**

Asadi and colleagues extend the hypolipidemic research using an animal model. The hepatic TG (triglyceride) concentration and the liver's production of TG and cholesterol were both said to be decreased by the tree leaves. Additionally, with a little increase in the FTE dose, the hepatic TG content and TG secretion values from the liver considerably decreased. This finding shows that the leaf extract may be an advantageous liver complement.<sup>16</sup>

**Erythropoietic effect:**

Lohar *et al.* reported about the erythropoietic activities of some medicinal plants found in India: *Aegelmarmelos L.* (Rutaceae), *Asparagus recemosus Willd* (Liliaceae), *Boerhaviadiffusa L.* (Nyctaginaceae), *Carissa congesta Wt.* (Apocynaceae), *Eugenia jambolana Lam* (Myrtaceae), *Ficus carica L.* (Moraceae), *Phoenix sylvestris L.* (Palmae), *Phyllanthusemblica L.* (Euphorbiaceae), *Spinacaoleracean L.* (Chenopodiaceae), and *Vitisvinifera L.* (Vitaceae) on Wistar albino rats. Fruit, leaf, and root extracts of these plants were prepared and fed to experimental rat model for seven consecutive days to evaluate their effects on the hematological parameters such as red blood cells count (RBC count) and hemoglobin (Hb%). In the test, animals showed augmentation as compared with the controlled group of rats. Rats fed with fruit extracts of *Aegelmarmelos*, *Carissa congesta*, *Eugenia jambolana*, *Ficus carica*, *Phoenix sylvestris*, *Phyllanthusemblica*, and *Vitisvinifera* separately showed increase in their hematological parameters. Obtained results indicate that most of the plant extracts boost synthesis of hemoglobin and formation of RBCs in the descending order: *Phyllanthusemblica*, *Spinacaoleracean*, *Ficus carica*, *Phoenix sylvestris*, *Boerhaviadiffusa*, *Aegelmarmelos*, *Vitisvinifera*, *Eugenia jambolana*, *Asparagus recemosus*, and *Carissa congesta*.<sup>26</sup>

**Anti-acne activity:**

Chandani M Vaghasiya *et al.* reported that the distilled water extract of fruits as well as leaves has the best anti-acne activity, almost comparable to that of Erythromycin in 1 mg/ml concentration.<sup>27</sup>

**Antispasmodic activity:**

An experiment was performed based on aqueous-ethanolic extract to study the antispasmodic effect. Outcome of the finding showed the presence of spasmolytic activity in the ripe dried fruit possibly mediated through the activation of K<sup>+</sup> ATP channels.<sup>22</sup>

**Anti helminthic activity:**

The methanolic extract of the Fig was screened to evaluate the nematicidal activity against *Bursaphelenchus xylophilus*, *Panagrellus redivivus*, and *Caenorhabditis elegans* nematodes. Outcome of the study confirmed that leaf extract has the strongest nematicidal activity causing 74.3%, 96.2%, and 98.4% mortality, respectively. In another study, anthelmintic activity of the latex were examined and results confirmed that administration in doses of 3 ml/kg/day was capable in the removal of *Syphacia obvelata* (41.7%).<sup>28</sup>

**Immunostimulant:**

The immunomodulatory effect of ethanol extract of the leaves of *Ficus carica* was studied in mice. This study was carried out with the help of various haematological and serological tests. Administration of extract remarkably ameliorated both cellular and humoral antibody response. Thus, the ethanol extract of the leaves of *Ficus carica* possess promising immunostimulant property.<sup>29</sup>

**Anti-ageing, wound healing properties:**

Ageing is a natural process that can be intrinsic and associated with specific genes, signalling pathways, and certain antioxidant mechanisms. In this sense, even though there are no specific studies on this property for *F. carica*, the wide variety of reports about the antioxidant potential and related properties makes it feasible to extrapolate that its by-products could be a source of potential anti-ageing metabolic compounds. In the case of wound healing, a recent study showed a reduced dose-dependent migration

in cells treated with *F. carica* latex, showing an anti-metastatic effect. Also, ficin, extracted from *F. carica* latex, improved the infected wound healing on rats acting as a biofilm.<sup>30</sup>

#### Antiepileptic and Anticonvulsant Properties:

Bhanushali *et al* suggested that *F. carica* can be a potential alternative for treating anxiety and epilepsy by modulating norepinephrine and 5-hydroxytryptamine in the brain. Essa *et al* observed that *F. carica* extract significantly reduced neuro inflammation by reducing the activities of inflammatory cytokines interleukin (IL)-1 $\beta$ , IL-2, IL-3, IL-4, IL-5, IL-6, IL-9, IL-10, tumor necrosis factor (TNF)- $\alpha$ , and Eotaxin in APPsw/Tg2576 mice.

A study by Bhanushali *et al* reported the effect of aerial parts of *F. carica* aqueous acetonetic extract on the central nervous system (CNS) in mice. In the study, *F. carica* concentrations of 250mg/kg and 500mg/kg reduced sleep latency and increased ketamine-induced sleeping time, similar to conventional drug, diazepam (0.5mg/kg), indicating its sedative-hypnotic properties. Various tests to evaluate *F. carica*'s muscle relaxant and anxiolytic properties such as motor coordination Rotarod test, Elevated-plus maze test, and Staircase test revealed that the effects of both doses of *F. carica* (250mg/kg and 500mg/kg) were similar to that of diazepam (0.5mg/kg). Utilizing mouse seizure models, the same study also demonstrated that *F. carica* extract at both doses suppressed clonic seizures induced by Pentylentetrazole and tonic seizures induced by maximal electroshock. These findings provided evidences of *F. carica* as antiepileptic, sedative-hypnotic, skeletal muscle relaxant and anxiolytic drug to improve CNS disorders.<sup>31</sup>

**Table5: Traditional and contemporary applications of *Ficus carica*.**<sup>26</sup>

S.No.	Ailment/use	Part/preparation used	Locality	Reference
1	Abdominal pain	Decoction with dried fruits and unpeeled almond Fruits are used a tonic	Abruzzo, Italy Gilgit, Pakistan	Idoloet al.(2010) Khan and Khatoon(2007)
2	Antihelmentic	Latex	Peshawar, Pakistan	Zabihullahet al.(2006)
3	Antiseptic for urinary tract	Decoction made with dried fruits, <i>Laurusnobilis</i> leaves and a peeled apple	Abruzzo, Italy	Idoloet al.(2010)
4	Anorexia	Bark, leaves and latex	Pakistan	Marwatet al. (2009)
5	Anemia	Fruit	Marwatetal.(2009)	Ramazanietal.(2010)
6	Ascites	Fruit	Khuzestan, Iran	Ramazanietal.(2010)
7	Beesting	Latex soothes the bee sting by simply rubbing on the skin	Buner,Pakistan	Badgujar(2011)
8	Blood deficiency	Leaves	South-eastern Nigeria	Nebedumet al.(2010)
9	Boils	Fruit extraction	Istanbul, Turkey	Gülayand Neriman(2006)
10	Bone treatment	Bark	India	Kirtikar and Basu(1995)
11	Bronchitis	Aqueous infusion of fresh leaf tender is taken orally as a drink	Ecuador	Teneetal.(2007)
12	Burn and Emollient	Fruit and latex	Nablus,Palestine	Jaradat(2005)
13	Cardiac troubles	Fruits are used as tonic	Gilgit,Pakistan	KhanandKhatoon(2007)
14	Corns	Latex	Istanbul, Turkey	Gülayand Neriman(2006)
15	Constipation	Juice extracted from fruit is taken orally	Jodhpur, India	Prajapatietal.(2007)
16	Cough	Decoction of fruit with honey Fruit and latex Decoction of boiled fruits is taken orally	Abruzzo, Italy Nablus, Palestine Northern and central Oman	Idoloetal.(2010) Jaradat(2005) GhazanfarandAl-(1993)
17	Diabetes	Decoction of leaves	Islamabad, Pakistan	Khanetal.(2011)
18	Drink(Tea)	Dry fruit powder is used in tea recipes, as nutrition alone	Turkey	Ismetetal.(2010)
19	Earache(2006)	Leaf juice with honey	Nepal	Kunwar and Bussmann
20	Eye/vision problem	Powder of dry fruits and taken orally with water twice a day	Abbottabad, Pakistan	Abbasietal.(2010)



21	Expectorant	Fruit	Northern Pakistan	Afzalet al.(2009)
22	Fever	Dried fruits	Bangladesh	Khanometal.(2000)
23	Food	Fruit	Shangla, Pakistan	Ibraret al.(2007)
		Dried fruit to sweeten decoction Leaves are fodder for goats	Buner, Pakistan	Idoloetal.(2010)
		The unripe fruit and young growth are cooked and eaten as vegetable	Abruzzo, Italy	Badgujar(2011)
			Rawalpindi, Pakistan	Husainetal.(2008)
24	Fuel	Wood	Buner, Pakistan	Badgujar(2011)
25	Hemorrhoids	Leaves	Istanbul, Turkey	Gülayand Neriman(2006)
26	Hepatitis	Decoction of fruit	Istanbul, Turkey	Gülayand Neriman(2006)
27	Inflammation	Bark	Khuzestan, Iran	Ramazanietal.(2010)
28	Intestinal pain	Bark	Pakistan	Marwatetal.(2009)
29	Jaundice	20 ml of leaf juice mixed with a cup of goat milk is administered early in the morning one a day for 3d	Andhra Pradesh, India	Manjulaetal.(2011)
30	Kidney stone	Fruit and latex Bark and leaves	Nablus, Palestine Pakistan	Jaradat(2005) Marwatetal.(2009)
31	Laxative	Fruit Leaves and latex Fruit juice is taken orally	Northern Pakistan Buner, Pakistan Jodhpur, India	Afzalet al.(2009) Zamanetal.(2011) Prajapatietal.(2007)
32	Leucoderma	Root	Maharashtra, India	Kalaskaret al.(2010)
33	Liver diseases	Fruit	Northern Pakistan	Afzalet al.(2009)
34	Menstruation pain and Sedative	Aqueous infusion of fresh leaf tender is taken orally as a drink	Ecuador	Teneetal.(2007)
35	Mouth cavity diseases	Dried fruits	Abbottabad, Pakistan	Qureshietal.(2008)
36	Paralysis	Dried fruit	Bangladesh	Khanometal.(2000)
37	Piles and chronic ulcer	Fruit juice and latex	Rawalpindi, Pakistan	Husainetal.(2008)
38	Regulates blood stream	Decoction made with dried fruits, lemon peel and <i>Laurusnobilis</i> leaves	Abruzzo, Italy	Idoloetal.(2010)
39	Skin disease	Fruit and latex Stem latex Fruit and latex	Nablus, Palestine Gilgit, Pakistan Nablus, Palestine	Jaradat(2005) Khan and Khatoon(2007) Jaradat(2005)
40	Stomach cancer	Leafy latex	Sari, Iran	Hashemiatal.(2011)
41	Wart	Milky latex is applied externally	Alasehir, Turkey Izmir, Turkey Jodhpur, India Istanbul, Turkey Kashmir, Pakistan	Ugulu(2011) Uguluetal.(2009) Prajapatietal.(2007) Gülayand Neriman(2006)
42	Weakness	Fruit juice Single dry fruit is deep in water for a night. This fruit is consumed at morning for 15d	Maharashtra, India	Ishtiaqetal.(2007) Patiletal.(2011)
43	Wound	Fruit and latex	Nablus, Palestine	Jaradat(2005)
44	Iron deficiency Anaemia in pregnancy	Dried fruit	Bangalore, india	Parveen et al (2021)

## DISCUSSION

The fig tree is among the most ancient fruit-bearing trees and valued not only as a source of food, but also for its medicinal properties. Ficus is one of the largest angiosperm genera, with over 800 species of trees, shrubs, hemiepiphytes, climbers, and creepers found throughout the tropics and subtropics. *F. carica*, or commonly known as fig, is a deciduous tree in the Moraceae family and is

one of the oldest cultivated trees in the world, with both fresh and dry consumption.<sup>31</sup> It is thought to have originated in western Asia. It has been used to cure disorders of the endocrine system (diabetes), respiratory system (liver diseases, asthma, and cough), gastrointestinal tract (ulcer and vomiting), reproductive system (menstruation pain), and infectious diseases (skin disease, scabies, and gonorrhoea). Fresh plant materials, crude extracts, and isolated components of *Ficus carica* have shown a wide spectrum of biological (pharmacological) activities.<sup>29</sup> Different parts like fruits, seeds, leaves, tender, bark, shoots and latex have many medicinal applications and its constituents have confirmed their role in diseases prevention and treatment.<sup>28</sup>

Preliminary phytochemical analysis showed that the fruits of *Ficus carica* contained alkaloids, tannins, glycosides, flavanoids, saponins, coumarins, sterols, terpenes carbohydrates, phenols, essential oil, volatile oil, proteins and minerals. The previous pharmacological studies revealed that *Ficus carica* possessed antibacterial, antiviral, antiparasitic, antioxidant, anticancer, antimutagenic, anti-angiogenic, anti-inflammatory, antipyretic, antidiabetic, antiplatelet, reproductive, endocrine, immunological, dermatological, hypolipidemic, antispasmodic, antidiarrheal, anti-warts, nephro and hepato- protective effects.<sup>25</sup> Present review discussed in detail its phytochemistry, traditional uses in detail, botanical description and habitat. In unani system of medicine, anjeer is being used since centuries. Because of its *garm tar mizaj* it is helpful in various diseases mainly skin disorders. It acts as laxative, helps in gaining weight and lightening of skin, works as *muqawwi-i-badan, mundij, mushil, kasir-i-riyah, jali, muqawwi-i- bah, muhallil-i-waram, muqawwi-i-jigar* and so on. Various traditional and contemporary benefits are demonstrated in table 5.

## CONCLUSION

Anjeer is full of nutrition that can not only be a part of healthy diet but also provides various benefits when incorporated in daily life. However further clinical trials, randomised controlled trials are required to confirm the efficacy of fig.

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## Competing Interests:

The authors declare no conflict of interest

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