A Review on Morphological and Pharmacological Aspect and Medicinal Uses of Tridax Procumben Linn

1Nilesh R.Vairal, 2Rushikesh S. Mahakal, 3Manoj S. Ghige, 4Shubham A. Fuke, 5Awinash S. Chavan

B.PHARM FINAL YEAR, RAOSAHEB PATIL DANVE COLLEGE OF PHARMACY, BANAPUR, MAHARASHTRA, INDIA 431202

ABSTRACT: A medicinal plant Tridax Procumbens commonly known as tridax daisy or kansari (Hindi) or Ghamara belonging to family Asteraceae. It is a plant used majorly in Indian traditional medicine and also use by different communities. It leaves contain phytoconstituents such as alkaloids, flavonoids, caretenoids, fumaric acid. It is use as antibacterial, anti-inflammatory, antimicrobial, vasorelaxant, antileishmanial, antianemic, immunomodulatory, hepatoprotective and mosquitocidal activities which have been scientifically screened. Still there many Reaserches are work on its active constituent in different field to use it natural ayurvedic medicine against various ailments and diseases’. this study is useful for modern science literature regarding medicinal properties, taxonomy, morphology, geographical distribution, phytoconstituents and pharmacological activities to prove and attempt to compile and review them in order to highlight its . Also, this study provides importance of this species and indicates that this species could be an effective, safe and cheap treatment for some ailment especially in regional areas where this plant is near and widely distributed.

KEYWORDS: Anticancer, wound healing, antibacterial activity.

INTRODUCTION:
Tridax Procumbens is medicinal plant commonly known as tridax daisy or kansari (Hindi) or Ghamara (in local language) belongs to family Asteraceae and Tridax procumbens. A medicinal plant Tridax procumbens is commonly known as tridax daisy or Kansari (Hindi) or trilobata are the other species the genus. It is a plant widely used in Indian traditional medicine system. It is an annual or perennial weed from l America and found in India mainly in maharashtra and madhya pradesh as a weed. It has long staled, yellow comparative flower. Whole arial part is medicinally use for wound healing, antibacterial, antisecretory and hypotensive action while seeds are used to control bleeding [1]. in old time, T procumben has been used in Ayurveda in India. by using these plant various creams, oils and skin product like skin polutics are manufactered. The different biological activities are because of different chemical constituent present in the plant. The use of these review is to critically evaluate T. Procumbens as an important medicinal plant with significant on the in-vivo properties of the chemical constituent and their roles in signalling pathways that can be work for specific pharmacological actions. The goals of this review is to highlight the importance of this species as a valuable medicinal plant.
Table 1. Classification of *Tridax Procumbens* Linn.

<table>
<thead>
<tr>
<th>Classification</th>
<th>Classing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kingdom</td>
<td>Plantae–Plants</td>
</tr>
<tr>
<td>Sub kingdom</td>
<td>Tracheobionta–Vascular plants</td>
</tr>
<tr>
<td>Division</td>
<td>Spermatophyta</td>
</tr>
<tr>
<td>Subdivision</td>
<td>Magnoliophyta–Flowering plants</td>
</tr>
<tr>
<td>Class</td>
<td>Magnoliopsida–Dicotyledons</td>
</tr>
<tr>
<td>Subclass</td>
<td>Asteridae</td>
</tr>
<tr>
<td>Order</td>
<td>Asterales</td>
</tr>
<tr>
<td>Family</td>
<td>Asteraceae–Aster family</td>
</tr>
<tr>
<td>Genus</td>
<td><em>Tridax</em> L.–<em>Tridax</em></td>
</tr>
<tr>
<td>Species</td>
<td><em>Tridax procumbens</em> L.–Coat buttons</td>
</tr>
</tbody>
</table>

Table 2. Synonyms of *Tridax Procumbens* Linn.

<table>
<thead>
<tr>
<th>Synonyms</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Chrysanthemum procumbens</em></td>
</tr>
<tr>
<td><em>Balbisia canescens</em></td>
</tr>
<tr>
<td><em>Balbisia divericata</em></td>
</tr>
<tr>
<td><em>Balbisia pedunculata</em></td>
</tr>
<tr>
<td><em>Tridax procumbens var. Canescenes</em></td>
</tr>
<tr>
<td><em>Tridax procumbens var. ovatifolia</em></td>
</tr>
</tbody>
</table>

**BOTANICAL MORPHOLOGY:**

*Tridax Procumben* is mainly found in open area. Usually, the height of *t procumben* is 50cm, which have a spreading tendency. The leaves of *tridax procumben* are oppositely manner with 6cm in length. *Tridax procumben* are occur in road.
side. Perfect flower are exactly in middle and the imperfect flower are around the edge of the head and the imperfect flower does not have stamen.

![Figure 3: A Complete Plant](image)

**Growth:**

Tridax Procumben forming patches with flowering axis reaches 50cm.

![Figure 4: Leaf](image)

**Leaves:**

The leaves of the tridax procumben are opposite. They are 2.5 to 5cm long. It has a deeply toothed margin and it is a thick and egg shaped. The leaves of T procumben are covered with hairy structure. It has a cuneate base.

![Figure 5: Inflorescences](image)

**Inflorescence:**

The inflorescence is solitary, terminal flower head on slender peduncle up to 20cm long. The flower are singly born on erect stem up to 30cm long.
**Flower:**

The flower of *T. procumben* is 1 to 1.5 cm wide which is held on the stalk. They are 10 to 30 cm long. They are heterogenous, bisexual flower. They have a yellow tubular florets central disk. Flowering occurs in spring.

**Fruit:**

The fruit of *T. procumben* is dark brown to black in color and it is 2 mm long. The fruit is conical achene, pubescent.

**Steam and Root:**

The steam of *T. procumben* is cylindrical in shape and it is covered with hair-like structure which are 1 mm in length and the steam are tuberculate at the basement. The roots of *T. procumben* is a strong tap root.
Genetics:
- There are a diploid number of 2n=36 chromosomes in tridax procumben carried out by cytological investigation.

**PHARMACOLOGICAL ACTIVITY:**
- The chemical constituent present in the tridax procumben shows various pharmacological activity such as antibacterial, antifungal, wound-healing activity, antioxidative, antioxidant, antidiabetic, hypotensive activity, immunomodulatory, etc.

**Antibacterial Activity:**
- Tridax procumben have a antibacterial activity against various bacteria such as antibacterial activity against the gram positive bacteria Staphylococcus aureus. The ethanol present in a tridax procumben give good activity against Pseudomonas aeruginosa. The ethanol present in a tridax procumben also shows good antibacterial activity against gram negative bacteria such as E. coli bacteria. The leaf of tridax procumben shows antibacterial activity against gram positive bacteria such as Staphylococcus aureus. Methanol present in tridax procumben shows good antibacterial activity against Salmonella typhi.

**Antifungal Activity:**
- The various part of tridax procumben shows antifungal activity. The leaf of the tridax procumben gives the great full effect against Fusarium oxysporum. The oil present in the tridax procumben have a good antifungal activity against Candida tropicalis fungi. The flavonoids which is contain by tridax procumben gives good antifungal activity against Candida albicans. The root of tridax procumben contain methanol that gives antifungal activity against various fungi such as a Candida glabrata. The methanol present in the leaf of the tridax procumben show the antifungal activity against Candida tropicalis.

**Hypotensive Activity:**
- Some parts of the tridax procumben gives very good hypotensive activity. The aqueous extract of the leaf of the tridax procumben help to decrease the blood pressure (arterial blood pressure). This study shows that the leaf of tridax procumben shows hypotensive effect.

**Antidiabetic Activity:**
- The tridax procumben shows good antidiabetic activity. The leaf of the tridax procumben contain water and alcohol which decrease the level of glucose in blood.

**Anti-inflammatory Activity:**
- The leaf of the tridax procumben shows good inflammatory activity.

**Immunomodulatory Activity:**
- The ethanol present in the leaf of the tridax procumben shows the good immunomodulatory action against Pseudomonas aeruginosa. The tridax procumben influence the action of humoral and cell-mediated immune system.

**Antioxidant Activity:**
- The tridax procumben plant contain a phenol which gives antioxidant activity. The tridax procumben has a 96.70% antioxidant activity which is higher than the gallic (93%) & ascorbic acid (95%) both of these are use as a standard.

**TRADITIONAL USES:**
- The tridax procumben is a wide spread herb in India has been traditionaly use to treat asthma, diarrhoea, fever, cough, it is also used as a drink to treat bronchial catarrh, dysentery and liver disease. These study also evaluate the potential use of tridax procumben to treat hyperuricemia, oxidative stress and bacterial infection. The tridax procumben contain a potassium, these are use to treat cramps. Tridax procumben are also use for hair growth traditionally. In India, the tridax procumben are traditionally use for wound healing, as an anticoagulant. Tridax procumben is use as a antibacterial, anticeptic antifungal. It also repell the insect (insecticidal). It prevent the falling of hair and it is use to increase the growth of hair. In Bangladesh the tridax procumben is use as folk medicine for the treatment of various disorder. It is use for the inhibition of DPPH free radical which cause oxidation. In the old time the tridax procumben are used in ayurvedic system of medicine for the treatment of liver disorder.

**PHYTOCHEMICAL CONSTITUENTS:**
- The tridax procumben is a wide spread herb in India. These plant are use as tradional medicine in India from the old time. These plant contain steroids, carotenoids, tannins, fatty acid, phytosterol, hydroxycinnamates. The tridax procumben contain 35 to 36% protein in steam which is dry in weight. The lipid and carbohydrate are present in the steam of tridax procumben is 0.50 to 1% which is dry in weight. The tridax procumben also contain minerals such as copper, zinc, iron, sodium, magnesium.

- There are many flavonoids are present in tridax procumben such as catechin which is 5187.515 mg/kg, galocatechin is 1522.281 mg/kg, genistein is 1590.816 mg/kg, daidzein is 3986.855 mg/kg, apigenin is 5127.089 mg/kg, butein is 2849.149 mg/kg, naringenin is 4071.731 mg/kg, biochanin is 5339.931 mg/kg, luteolin is 1111.266 mg/kg, quercetin is 2875.972 mg/kg,isorhamnetin is 334.132 mg/kg, robitin is 2535.979 mg/kg, ellagic acid is 1183.313 mg/kg, myricetin is 1915.467 mg/kg, baikalein is 1983.819 mg/kg, nobiletin is 1944.91 mg/kg of all these weight of flavonoids is dry weight.

**CONCLUSION:**
- The tridax procumben is a herb which is found throughout in India. Tridax procumben has been extend potential for botanical, phytochemical, nutritional, pharmacological properties. These study of tridax procumben shows that...
the tridax procumben are widely use in the old time for the treatment of various disease and every part of the tridax procumben gives various important pharmacological activity, whole of these importance are disussed in above reviw article. the main aim of these these article is that the how usefulness tridax procumben for the treatment of various disease and how these herbal plant are usefull for the pharmaceutical industry in future.

REFERENCES:
10. A Review On Medicinal Importance Of Tridax Procumben Linn, Himanshu C. Chaudhari*, Kiran P. Patil 14-Feb-2022, DOI: 10.2320-0189.11.1.001
11. P. Ghosh1, S. Biswas2, M. Biswas3, A. Dutta4, S. Sil5, S. Chatterjee6*, Morphological, Ethno biological and Phytopharmacological Attributes of Tridax procumbens Linn. 30/Apr/2019