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Letter to Editor

**CALOTROPIS GIGANTIA: RARE TRADITIONAL MEDICINAL PLANTS IN BANGLADESH HAVING HIGH POTENTIAL ETHNOMEDICINAL VALUE**

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**ABSTRACT**

*Calotropis gigantea* (Family: Asclepiadaceae) which also known as Mandar, akado, khok is a rare medicinal plants which have high ethno botanical and traditional practice in Bangladesh. Different parts of the plants are commonly used in preparation of various important ayurvedic, unani and homeopathic medicines as well as practice in alternative medicines. The extract of the leaves has been reported to contain a chief chemical known as mandarin. Instead of this, the extract of the root bark and latex have high toxicity.

**Keywords:** *Calotropis gigantea*, Asclepiadaceae, Traditional medicine, Bangladesh.

**LETTER**

*Calotropis gigantea* (Family: Asclepiadaceae) contain a principal active constituent known as mandarin. It contains resin and three glycosides namely calotropin, uscharin, calotoxin. These glycosides have been reported to be highly toxic in nature<sup>1</sup>. The latex contains a very toxic bacteriolytic enzyme calactine which acts as a defense mechanism against grasshoppers and other insects. The plant extracts is reported to contain giganteol, isogiganteol and b-sitosterol etc. chemical compounds. Instead of Bangladesh, the plant grows in Africa, France and India.

The whole plant (Panchang) when dried and consumed is reported to act as a good tonic, anthelmintic and an expectorant. The dried roots are powdered and used effectively to cure bronchitis, asthma, leprosy, eczema and elephantiasis. The secretion of the root bark is also used in the treatment of skin diseases, wound healing<sup>2</sup>, enlargement of abdominal viscera, intestinal worms, cough, ascites, anascara, anti-inflammatory<sup>3</sup>.

- In the ethno botanical practice, milky juice of the plant is regarded as a drastic purgative and caustic. Flowers are used to improve digestion, catarrh and increase appetite. The leaf-ash is used with whey for treating abdominal cases.
- In traditional practice, the root bark with latex is smoked for cough. The juice is used for the purpose of infanticide and is sometimes taken by women to induce abortion.
- In alternative medicine practice, the plant is used in the preparation of various homoeopathic medicines as well as

can be successfully used alternatively in biometanation, anticancer and cancer chemoprevention activity<sup>4</sup>. The milky juice of the plant has been traditionally used by tanners to remove hair from hides. The processed extract of the leaves of the plant is used in the treatment of vertigo, hair loss, tooth aches, intermittent fevers, swelling of joints and paralysis. In traditional practice, the leaves of the plant are heated in oil and attached over a joint of the body to relieve swelling and pain. However it is recommended that the application of the extract or the latex of this plant should be made in the supervision of a knowledgeable Ayurvedic medicinal practitioner only.

Instead of this, the plant shows high toxicity. The extract of the root bark if consumed in higher doses may causes nausea, vomiting and diarrhea. Accidental entry of the latex of this plant into eye causes congestion with tear and local anesthesia, followed by deeper effects due to absorption. Calotropin, found in the plant extract is reported to be 15-20 times more toxic than strychnine<sup>1</sup>. The latex of the plant has been in traditional uses as arrow poison by some traditional tribal communities of India and Africa.

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