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Ethnopharmacological Note

A note on novel anti-diabetic use of *Calotropis procera* latex

Priyanka Rani Roy, Najmun Nahar Chhanda, Tanben Rahman, Syeda Seraj, Rownak Jahan*

Department of Pharmacy, University of Development Alternative, Lalmatia, Dhaka-1207, Bangladesh

* *Rownak Jahan*: rownak86@hotmail.com

Calotropis procera (Aiton) R.Br. (Asclepiadaceae) is a species of flowering plant known as 'akondo' in Bangladesh and can be found growing in the wild and roadsides. The plant exudes a milky sap (latex) when stems and leaves are cut or bruised. Latex and leaves as well as other parts of the plant are considered medicinal. Leaves are chewed as treatment of malaria in Karnataka, India (Prakash and Unnikrishnan (2013). In a review paper (Verma et al., 2010), various ethnomedicinal uses of different parts of *C. procera* have been mentioned. As mentioned by the authors, in different parts of the world, the whole plant is used for treatment of fever, rheumatism, cold, eczema, indigestion, diarrhoea, boils, and jaundice. The roots are used for hydrocele, headache, severe body pain, convulsions, eczema, leprosy, elephantiasis, asthma, cough, rheumatism, filariasis, dysmenorrhoeal, dog bite, dysentery, paralyzed limbs, protracted labour, spleen complaints, cholera, enlargement of abdominal viscera, and intestinal worm infestations. Stems are used as toothbrush to cure toothache. Stem latex is used to treat tuberculosis and leukoderma. Leaves are used to treat migraine, nematode infections, fever, hydrocele, headache, severe body pain, malarial fever, joint and waist pain, convulsions, asthma, elephantiasis, and leprosy. Leaf latex is used for scorpion and snakebites, warts, black scars on face, boils, coughs, asthma, earache, eczema, skin eruptions, inflammatory lesions, body pain, rheumatism, syphilis, leprosy, oedema, painful tooth cavities, ringworm, and wounds. Flowers are used for migraine, abdominal diseases, asthma, dandruff, cholera, severe dysentery, flatulence, anorexia, indigestion, intestinal worms, and piles. In Bangladesh, a folk medicinal practitioner (FMP) of Jhenaidah district has been reported to use leaf juice of the plant against tumors (Kundu et al., 2016). Leaves are used by FMPs of Chuadanga district, Bangladesh to treat pain and sprains (Khatun et al., 2013). The Marma tribal healers of Khagrachhari district, Bangladesh use leaves of the plant to treat rheumatic pain (Malek et al., 2014). A FMP of Rangpur district, Bangladesh uses young leaves of the plant to treat body pain and pneumonia (Azad et al., 2014). A random ethnomedicinal survey in Rangpur district of Bangladesh revealed a new therapeutic use of the latex of the plant. Latex obtained from stems of the plant was dried and powdered and advised to be taken orally twice weekly by a folk medicinal practitioner in Noakhali district, Bangladesh. According to the FMP, this would keep blood glucose within normal limit in diabetic patients. The FMP, by his own admission, specialized in the treatment of diabetic patients and had been treating diabetic patients for forty years. The plant was identified at the Bangladesh National Herbarium (Accession Number 43388). Interestingly, scientific reports indicate that the leaf and root extracts of the plant have antihyperglycemic action (Rahmatullah et al., 2010;



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Bhaskar and Singh, 2009). The latex, in scientific studies, may prove to have antihyperglycemic activity and can be a potential source of compounds to treat diabetes.

Declaration of Conflict of Interest

No conflict of interest associated with this work.

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Figure 1: *Calotropis procera* (Aiton) R.Br.