Medicinal Potential of Poisonous Plants of Tehsil Kahuta from District Rawalpindi, Pakistan

Sohail Jamil Qureshi1, Sofia Bano2, Taj Mohammad2 and Mir Ajab Khan1
1Department of Biological Sciences, Quaid-i-Azam University Islamabad, Pakistan
2Department of Chemistry, Government Postgraduate College Abbottabad, Pakistan

Abstract: Medicinal potential of some poisonous plant was studied from Kahuta Rawalpindi district. Calotropis procera is a remedy for asthma, leprosy and skin diseases. Convolvulus arvensis is mild poisonous plant. It is an excellent remedy for skin diseases and is also used for washing hair to remove dandruff. Oil of Ricinus communis is useful in constipation in children and the plant is used as an antiseptic. Root of Euphorbia helioscopia is used as an anthelmintic. Tribulus terrestris is also a mild poisonous plant for humans but poisonous for goats. The leaves of Cannabis sativa are antispasmodic, narcotic and sedative.

Key words: Ethnobotany, Kahuta, Rawalpindi, poisonous and medicinal plants and chemical constituents

Introduction
Poisonous plants are those which cause serious problems or even death occur, if a small quantity of its stem, leaves, seeds, fruits and roots are ingested. According to Chopra (1984), it is also defined as “A poisonous plant is the one which, as a whole or a part thereof of under all or certain conditions and in a manner and in amount likely to be taken or brought into contact with an organism, will exert harmful effects or cause death either immediately or by reason of cumulative action of the toxic property, due to the presence of known or un-known chemical substances in it and not by mechanical action”. The effect of a poison may also be destroyed or modified by heating, boiling, or drying. Some herbs are not poisonous if used externally, but are harmful if used internally. Some other plants are normally harmless but they may become toxic if preparative from them are taken in excess in strong doses or for along period of time.

Herbal remedies are receiving increasing attention worldwide. Many of the important plant derived drugs have been instrumental and essential in ushering in the era of modern medicine. Today, natural products represent 50% of all drugs in clinical use. Plants have been used for their therapeutic potential in various segments of the society for centuries.

Materials and Methods
During the fieldwork trips were arranged in 74 proper harvest time of plants and information collected from the inhabitants of the area. The out come of the results were rechecked and compared with literature. Plant specimens were collected preserved and identified in the herbarium of Quaid-i-Azam University, Islamabad. After this analysis of the data was done and indigenous knowledge was documented which are as follows:

Family: Asclepiadaceae:
Botanical Name: Calotropis procera (Willd.) R. Br.
Common Name: Aak (Urdu, Sindhi), Ak (Hindi)
Distribution: Sparsely distributed throughout the area.

Chemical constituents: Leaves and stalk contain voruscharin, calotoxin, calotropin, uscharin, trypsin, calactin, uzarigenin, syriogenin and proceroide isolated from latex, benzyllineolone and benzyloisolineolone from root and cyanidin-3-rhamnoglucoside isolated from flowers.

Poisonous constituents: Many substances obtained from latex, trypsin, calotoxin and calotropin, which apparently are jointly responsible for toxicity of plant (Adams, 1963).

Medicinal use: All parts of the plants are poisonous. The latex of the plant causes blindness as well as irritate to the skin and mucous membrane. Approximately 4 ml to 5 ml of latex may cause death. Roots and bark are used as tonic, sudorific, antispasmodic and expectorant, in large dose emetic. Flowers digestive, stomachic. Milky juice is poisonous. Also used in leprosy, asthma, fever with enlarged liver and cough, skin diseases. Powered bark is locally used in dysentery, stem is used for toothbrush and the ash of plant is used for coloring cloth. The plant may cause severe bullous dermatitis, labored respiration, increased blood pressure and death (Duke, 1986). Corona of the flowers is used to cure asthma.

Family Convolvulaceae:
Botanical Name: Convolvulus arvensis L.
Common Name: Leli (Punjabi), Prasarna (Hindi)
Distribution: Common

Chemical Constituents: Plant contains convolvulin, tannin. A substance has been isolated from the extracts of roots, which is water-soluble and has vitamin “K”, like blood coagulation effect. It also contains resin 42%, campesterol, alpha-Amyrin, stigmasterol, beta-Sitosterol, n-alkanes and n-alkanols isolated from aerial parts. Umbelliferone and scopoletin isolated, presence of isoferulic acid confirmed.

Poisonous constituents: The principle toxic substances are convolvulin and tannin.

Medicinal use: The root contains cathartic properties and some European authorities regard it as poisonous because it produces severe gastrointestinal irritation. Dried rhizome contains about 4.9% of a potent purgative resin (Chopra and Abrol, 1983). The roots are known as purgative but not so much in use. For worms “Chanona” saag is used with food. The whole plant is used for skin diseases. For washing hair to remove dandruff. Roots are also laxative and used in diarrhoea.

Family: Euphorbiaceae:
Botanical Name: Ricinus communis L.
Common Name: Erand (Punjabi), Arand (Urdu)
Distribution: Common weeds in field and open places.

Chemical Constituents: Fixed oil (Oleum Ricini USP 45 to 50%) consisting of glycerides of ricinoleic isoricinoleic, dihydroxy stearic acid etc. A crystalline alkaloid called Ricinine, a toxin “ricin”, lipase and other enzymes, gums etc. Free ricinolic acid is produced by the hydrolysis of castor oil in the intestine.

Poisonous constituents: The principal toxic substances are ricinone, glycerides of ricinoleic, isorcinolic and...
**Botanical Name:** Tribulus terrestris L.

**Family:** Euphorbiaceae

**Common Name:** Chaur, Bhang, Dodak

**Distribution:** Growing wild throughout the area.

**Chemical Constituents:** Plant contains tribulosin, gracilin, trillin and dioscin. Diosgenium, ruscogenin and a dihydroxy spirosteroideal sapogenin isolated from aerial parts. Root contains campesterol, sitosterol, stigmasterol, diosgenin and neotigogenin.

**Poisonous constituents:** It contains harman, harmine and hydrocyanic acid (Duke, 1986).

**Medicinal use:** The fruit is regarded as tonic, diuretic, cooling and aphrodisiac. Also used in urinary disorders, impotency, cough and heart problems. The seeds are recommended in hemorrhages, diseases of the bladder, kidney stone and gout. This plant contains a photosensitizing principal, observed by Brochmann (1943), which has caused poisoning among sheep’s. Efforts to isolate the hepatic toxin have so far been fruitless, it causes the blood to accumulate phylloerythrin, photodynamic agent produced by the microbial break down in the stomach of the sheep. Sheep dosed with plant juice die within few hours, without showing any symptoms (Chopra, 1984).

**Family Cannabisaceae:**

**Botanical Name:** Cannabis sativa L.

**Common Name:** Bhang (Urdu, Hindko and Pushto)

**Distribution:** Growing wild throughout the area.

**Chemical constituents:** It included, cannabiol, cannabinoids, resin, cannabin, pseudocannabinol, cannabin and several terpenes.

**Poisonous constituents:** It includes, cannabinol, resin, cannabin, cannabinin etc.

**Medicinal use:** The plant is used as tonic, narcotic, sedative and anodyne. Dried and crushed leaves are taken as drink for their narcotic action also used, as refrigerant. The leaves are antispasmodic, narcotic, sedative digestive and astringent. Paste of fresh leaves is used for tumours. The preparation made from dried leaves and flowers known as Bhang or Hashish is given in dyspepsia, gonorrhea and bowel complaints. The dried pistillate flowering tops coated with resinous exudation and known as ganja is swallowed as an antidote to poison. Chares is the resinous exudation on the leaves is active principle of this plant. Cannabisin is a powerful sedative and hypnotic in action. This plant yields valuable fiber from the inner bark of the stem and is used to make ropes.

**References**


