

Poisonous Plants : A Review

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Abstract

The world of floral diversity is amazing. India has rich and varied flora just like its culture. Plants are so amazing and beneficial for human being in every aspect. Without plants life is not possible on earth. Plant and flowers are also used for decoration of home as ornamental, some plants are poisonous in nature. Beautiful flowers and plants may have toxic properties. Inhabitant of rural area dependent on their farms and garden for foods may have poison. The term poisonous designates many kind of reactions or effects. The poisonous plant may be irritant, causing skin rashes, skin photosensitization causing allergic reaction. On the basis of causing internal poisoning, plant may be Cardiotoxic, Hepatotoxic, Neurotoxic and Cerebraltoxic. The substance responsible for mostly secondary metabolite or by product. Plant can differ by degree of toxicity and may be classify in to three different category Extremely, Moderately or Minimally. Poisonous nature of plant is due to the presents of Alkaloids Glycosides, Mineral, Oxalate, Photosensitizing compound ,toxic polypeptide or amine or resins. This paper listed the poisonous plants which are found in India. The poisonous plants are alphabetically arranged along with their botanical name, common name, family, toxins and alkaloids, poisonous parts and their toxic effects have been summarized. Many species of toxic plants has been reported from different plant families. Mostly the poisonous parts of toxic plants have been reported to be seeds, root, root bark, fruits, stem, stem bark, tubers, bulbs and sometimes whole plant.

Key Words – Poisonous plants, Toxic Chemicals, Toxins.

Introduction

The world of floral diversity is amazing. Plants are so amazing and beneficial for human being in every aspect. Without plants life is not possible on earth. Plant and flowers are also used for decoration of home as ornamental, some plants are poisonous in nature. Beautiful flowers and plants may have toxic properties. All types of native and introduced plants can be poisonous including ferns, herbaceous plants, woody shrubs, and trees. Lots of plants are poisonous or capable of causing highly allergic reactions. Symptoms of poisoning from plants can include, vomiting, stomach cramps, irregular heartbeat, burning to the mouth, lips or tongue, convulsions. The danger can range from mild irritation to severe illness or death. Poisonous content are concentrated only in certain plant parts, others are in entire plant parts. Few poisons are destroyed by cooking. Certain poisons disappear as the plant ages, some build-up as the plant ages. Many poisonous plants have such unpleasant taste. Some plant are not distasteful and can even be sweet, if eaten in large quantity can be cause serious problems for long the period. Adults have been poisoned by ingesting misidentified plants. Poisonous effect occurs according to age and health of human being. The term “poisonous” designates many kinds of reactions or effects. Among these effects are allergic reactions, irritations, skin rashes or dermatitis, skin photosensitization, and internal poisonings. On the basis of causing internal poisoning plant may be affect heart, liver, nerves and brain. The substance responsible for poisoning is mostly secondary metabolite or by product. Poisonous nature of plant may be due to the presents of Alkaloids, Glycosides, and Mineral, Oxalate, Photosensitizing compound, toxic polypeptide or amine or

resins. Plant can differ by degree of toxicity and may be classify in to three different categories Extremely, Moderately or Minimally. Identifying plants that are poisonous is difficult since poisonous plants do not appear distinctly different from their nontoxic relatives. Plant poisons are the chemical constituents of organic nature, which are naturally synthesized in the plants through their individual cellular activities with the help of enzymes.

Classification of the Poisonous Plants

(a) Classification of the Poisonous Plants on the basis of Chemical Constituents.

Poisonous plants contain many alkaloids and glycosides, which are used as a medicine. There are more than twenty groups of chemical constituents accumulated from the soil, which make a plant or its part to be poisonous. According to their chemical constituents, plant poisons are broadly classified in following groups

(i) **Alkaloids**- These are nitrogenous compounds which are complex, physiologically active, typically taste bitter, and are usually insoluble in water.

(ii) **Glycosides**- These compounds produce one or more sugars (glycones) and one or more toxic aglycones they are usually colorless, bitter, crystalline solids.

(iii) **Minerals**- This category of poisoning is associated with high levels of particular minerals in the soil or atmosphere and subsequent uptake by plants, levels of these minerals are accumulated in the plants such that they become toxic, among the minerals often associated with toxicity are lead, copper, and arsenic.

(iv) **Oxalates**- These consist of soluble oxalates and oxalic acid, poisonings are often attributed to small crystals of insoluble calcium oxalate which cause oral irritation when ingested.

(v) **Photosensitizing Compounds**- These compounds are psoralens which result in acute sensitivity of skin to sun or other sources of light after exposure, psoralens are furocoumarins.

(vi) **Phytotoxins (Toxalbumins)**- These compounds are toxic protein molecules that are similar to bacterial toxins in structure and reaction.

(vii) **Polypeptides and Amines**- these are nitrogenous compounds such as phenylethylamine and tyramine.

(viii) **Resins**- these are compounds that are often chemically very different but which share certain physical characteristics; these compounds melt or burn easily, are soluble in organic solvents, insoluble in water, and don't contain nitrogen.

(b) Classification of the Poisonous Plants on the basis of their effect on body

Poisonous plants cause allergic reactions, irritations, skin rashes or dermatitis, skin photosensitization, and internal poisonings. In internal poisoning plant may be affect heart, liver, nerves and brain. According to effects on the body the poisonous plants are of following types

(i) **Plants that are irritant**- *Calotropis procera*, *Citrullus colocynthis*, *Ricinus communis*, *Gloriosa superba*, *Anamitra cocculus*, *Ipomoea hederacea*, *Helleborus niger*, *Colchicum luteum*, *Cleistanthus collinus*, *Jatropha curcas*, *Delphinium*, *Taxus baccata*, *Crinum asiaticum*, *Semecarpus anacardium*, *Abrus precatorius*, *Garcinia morella*, *Cytisus laburnum*, *Veratrum album*, *Croton tiglium*.

(ii) **Cardiotoxic Plants**- *Nerium oleander*, *Thevetia Peruvian*, *Digitalis purpurea*, *Nicotiana tabacum*, *Lobelia cardinalis*, *Aconitum napellus*, *Areca catechu*, *Strophanthus gratus*, *Cerbera odollam*.

(iii) **Neurotoxic Plants**- *Papaver somniferum*, *Strychnos nux vomica*, *Conium maculatum*.

(iv) **Hepatotoxic Plants**- *Melia azadirachta*.

(v) **Cerebral toxic Plants**- *Artemisia maritima*, *Erythroxylum coca*, *Hyoscyamus niger*, *Datura stramonium*, *Atropa belladonna* *Cannabis sativa*.

(vi) **Miscellaneous Poisonous Plants**

Classification of the Poison

On the basis of their nature of poison, the plant based poisons are broadly classified in three major groups such as

(a) Systemic

1. Cardiovascular System
2. Nervous System
3. Respiratory System

(b) Corrosive

1. Alkalis
2. Strong Acids
3. Organic Acids

(c) Irritant

1. Metallic irritant
2. Nonmetallic irritant
3. Inorganic irritant

Observation

This paper listed the poisonous plants which are found in India. The poisonous plants are alphabetically arranged along with their botanical name, common name, family, toxins and alkaloids, poisonous parts and their toxic effects have been summarized in Table 1.

Table 1. Poisonous plants, their botanical name, common name, family, toxic part, toxins and alkaloids and their toxic effects

No	Botanical Name	Common Name	Family	Toxic Parts	Toxins and Alkaloids	Toxic Effects
1	<i>Abrus precatorius</i>	Jequirity, Indian liquorice, Gunchi or Rati	Leguminosae	Seeds	Abrin	Nausea, vomiting, abdominal cramping, diarrhea, and dehydration multisystem organ failure.
2	<i>Aconitum napellus</i>	Indian aconite, monkshood and mitha zahar	Ranunculaceae	All parts especially tuberous root and leaves	Aconitine	Burning in the mouth after ingestion, headache, muscular weakness, dimness of vision, paresthesia, blood pressure abnormalities and ventricular fibrillation.
3	<i>Aesculus hippocastanum</i>	Horse - chestnut, conker	Spandiaceae	All parts especially seeds	Saponin	Nausea, muscle twitches and sometime paralysis.
4	<i>Agave genus</i>	Century plant	Asparagaceae	Sap	Saponin	Acute contact dermatitis, burning, blistering lasting several weeks and itching. If ingested, the agave plant can have serious consequences including kidney and liver damage.
5	<i>Aleurites species</i>	IndianWalnut,	Euphorbiaceae	All parts especially seeds	derivative of phorbol,	Sensation of discomfort, warmth and nausea, vomiting, abdominal cramping, diarrhea, dehydration.
6	<i>Alocasia macrorrhiza</i>	Giant taro, elephant ear	Araceae	All parts especially tubers	Raphides of water-insoluble calcium oxalate	Painful burning sensation of the lips and mouth result from ingestion. There is an inflammatory reaction, often with edema and blistering. Hoarseness, dysphonia, and dysphagia may result.

7	<i>Anamitra cocculus</i>	Kakphal, Crow killer	Menispermaceae	Fruit n Seeds	Picrotin, picrotoxin, cocculin, anamirtin, picrotoxic acid.	Unconsciousness, delirium, Convulsions, gastroenteritis and paralysis, protruding eyes, shaking while walking, muscle irritation that leads to spasms and twisting of the entire body, forming of foams at the mouth, breathing troubles.
8	<i>Anthurium genus</i>	Anthurium, Flamingo flower	Araceae	All parts	Calcium oxalate crystals, proteolytic enzymes	Irritating to skin and eyes, oral swelling to the point that swallowing and breathing become impaired.
9	<i>Antiaris toxicaria</i>	Upas tree, Antiaris	Moraceae	Leaves and bark	Cardiac glycosides Antiarin	Twitches in the target, which then becomes full convulsions, unconsciousness, and final death through cardiac arrest.
10	<i>Areca catechu</i>	Areca or betel nut, supari	Arecaceae	Leaf and nut	Arecoline and arecaidine	Oral squamous cell carcinoma, cholinergic and carcinogenic, bronchoconstrictor and can cause exacerbation of bronchospasm, Mouth cancer.
11	<i>Argemone mexicana</i>	Argemone and Sial-kanta	Papaveraceae	All parts especially seeds	Sanguinarine, dihydrosanguinarine	Dropsy with symptoms including extreme swelling in legs.
12	<i>Arisaema triphyllum</i>	Devil's Ear, Indian Jack-in-the-Pulpit, Indian Turnip	Araceae	Whole plant.	Raphides of water-insoluble calcium oxalate and unverified proteinaceous toxins	Inflammatory reaction, often with edema and blistering. Hoarseness, dysphonia, and dysphagia
13	<i>Artemisia maritima</i>	wormseed, Kirmani	Asteraceae	Immature flower head and Leaves	Santonin	Nausea, abdominal pain, Dizziness, Diarrhea, Convulsions, Dilirium, Stupor, Coma
14	<i>Atropa belladonna</i>	Deadly nightshade, Belladonna	Solanaceae	All parts	Atropine, Hyoscine, Hyoscyamine	Dilated pupils, blurred vision, dry mouth and slurred speech, urinary retention, constipation, confusion, hallucinations, dilirium and convulsions.
15	<i>Caesalpinia vesicaria</i>	Indian Savin Tree	Fabaceae	seeds are poisonous	Tannins, protein precipitants	Nausea, vomiting, abdominal cramping, diarrhea and dehydration
16	<i>Calophyllum inophyllum</i>	Indian Laurel, Kamani	Guttiferae (Clusiaceae)	seed kernel	Inophyllum A-E, calophyllolide, calophynic acid.	nausea, vomiting, abdominal cramping, diarrhea, and dehydration. keratoconjunctivitis on contact with the cornea.

17	<i>Calotropis procera</i>	Madar, Akdo, Milk weed	Asclepiadaceae	Latex	Calcium Oxalate Crystals and Cardioactive Steroids	Burning sensation, vomiting, inflammatory reaction. Hoarseness, dysphonia, and dysphagia, redness of skin, swelling, and vesication, contact with eyes results in conjunctivitis.
18	<i>Cannabis sativa</i>	Indian hemp, Bhang	Cannabinaceae	Dried leaves and fruit, flowers, resin of leaves and stems.	Cannabidiol	Difficulty with coordination, decreased muscle strength, decreased hand steadiness, postural hypotension, lethargy, decreased concentration, slowed reaction time, slurred speech, and confusion, amnesia, delusions, hallucinations, anxiety, and agitation, paranoia, panic disorder, fear, or dysphoria
19	<i>Cassia fistula</i>	Golden Shower, Indian Laburnum,	Fabaceae	Sticky fruit pulp , leaves and bark	Emodin glycoside and anthraquinone cathartic	Nausea, vomiting, abdominal cramping, diarrhea, and dehydration. Emodin can also cause benign discoloration of the urine
20	<i>Cassia occidentalis</i>	Senna	Fabaceae	Whole plant	Chrysarobin, Cathartic and emodin.	Gastrointestinal symptoms ,muscle necrosis, and death.
21	<i>Catharanthus roseus</i>	Madagascar periwinkle, Periwinkle	Apocynaceae	whole plant	Vincristine	Pharyngeal, abdominal pain and severe, persistent diarrhea, bone marrow suppression and cardiovascular collapse.
22	<i>Cerbera odollam</i>	Kerala suicide nut, ordeal tree, pong-pong ,suicide tree	Apocyanaceae	seed and kernel of the fruit	Cerberin,	Blocks cardiac calcium ion channels
23	<i>Citrullus colocynthis</i>	Indrayan, Colocynth	Cucurbitaceae	Fruit pulp and Root	Colocynthin, Colocynthetin, Colocinthol	Vomiting, diarrhea, hypotension, shock diarrhea, colonic inflammation and rectal bleeding.
24	<i>Cleistanthus collinus</i>	Garari, Cleistanthis	Euphorbiaceae	Leaves	Cleistanthin, collinusin, diphyllin and Oduvin	Vomiting, epigastric pain, breathlessness, visual disturbances, giddiness, drowsiness, fever, tachycardia, hypotension, and respiratory arrest. Adult respiratory distress syndrome, distal renal tubular acidosis.
25	<i>Colchicum luteum</i>	Suranjan, Cholchicine, Meadow saffron	Liliaceae	All parts, Bulb	Colchicine	Gastrointestinal upset , neutropenia, Damage bone marrow, numbness and tingling in the hand, cardiovascular collapse, burning in the mouth and throat, fever, vomiting, diarrhea, kidney and respiratory failure.

26	<i>Conium maculatum</i>	Conium, poison snakeweed, hemlock	Apiaceae	All parts	Conine	Stomach pain, vomiting, paralysis of the central nervous system
27	<i>Crinum asiaticum</i>	Nagdamani, Crinum	Amaryllidaceae	Rhizome	Crinamine, Crinifoline, Nicinine and Latifine.	Skin irritation, gastric irritation, colic pain of abdomen, nausea,
28	<i>Crotalaria juncea</i>	Rattle Box, Shake-Shake	Fabaceae	Whole plant	Monocrotaline and other pyrrolizidine alkaloids.	Hepatitis and chronic exposure to lower levels may cause hepatic veno-occlusive, pulmonary hypertension
29	<i>Croton tiglium</i>	Purging croton, Jamalgota	Euphorbiaceae	Seeds and oil	Crotocaudin, Crotonol	Burning pain in the upper gastrointestinal tract, vomiting, tenesmus, watery or blood-stained diarrhea, hypotension, collapse, coma, and death.
30	<i>Cytisus laburnum</i>	Golden Chain Tree, Vishkalaay	Leguminosae (Fabaceae)	All parts of the plant, particularly the seeds	Cytisine	Gastrointestinal effects, hypertension, large pupils, sweating, seizures. Severe poisoning produces coma, weakness and paralysis that may result in death.
31	<i>Datura stramonium</i>	Thorn apple and datura	Solanaceae	All parts especially seeds and fruit and dried leaves	Atropine, Scopolamine, and Anticholinergic alkaloids.	Dysphagia, dysphonia and urinary retention. Elevation of body temperature dry skin, blurred vision, excitement and delirium, headache, and confusion.
32	<i>Delphinium staphisagria</i>	Larkspur, Nirvishi	Ranunculaceae	Young plant and seeds	Delsoline, Delphenine and Staphisagrine	Nausea, abdominal pain, inflammation, muscle twitching, breathing problems, paralysis and often death.
33	<i>Dieffenbachia seguinepicta</i>	Dieffenbachia, dumbcane	Araceae	All parts	Raphides of calcium oxalate.	Chewing on the leaf produces an intense pain cause intense burning, reddening of the skin, irritation and immobility of the tongue, mouth and throat if ingested, block breathing and leading to death.
34	<i>Digitalis purpurea</i>	Yellow broom, fox glove	Scrophulariaceae	Seed, leaves and Twigs	Digitoxin, Digoxin, Saponins	Nausea, emesis, abdominal pain, cramping and diarrhea develop after ingestion. Dysrhythmias, premature ventricular contractions, atrioventricular conduction defects.
35	<i>Erythroxylum coca</i>	Coca, Cocain plant	Erythroxylaceae	Leaves	Cocaine	Mydriasis, headache, bruxism, nausea, vomiting, vertigo, nonintentional tremor, tics, preconvulsive movements, and

						pseudohallucinations.
36	<i>Euonymus atropurpureus</i>	Burning Bush, Indian Arrow Wood,	Celastraceae	Fruit and bark	Cardioactive steroid, alkaloids theobromine and caffeine,terpene	Cathartic and may produce emesis,ingestion of fruit cause liver and kidney damage and death
37	<i>Euphorbia nerifolia</i>	Common Milk Hedge	Euphorbiaceae	Latex	Euphorbon, Phorboids	Nausea, abdominal pain, Diarrhea, Irritation, vesication, Coma
38	<i>Euphorbia milii</i>	Crown-of-thorns	Euphorbiaceae	Latex	Euphorbon, Phorboids	Skin and eye irritant. Poisoning symptoms from ingesting the Crown-of-Thorns include abdominal pains, blistering, throat irritation and vomiting.
39	<i>Euphorbia pulcherrima</i>	Poinsettia	Euphorbiaceae	Sap latex	Euphorbon, Phorboids	Allergic reactions, irritating to the skin or stomach,diarrhea and vomiting ,sap causes temporary blindness.
40	<i>Euphorbia tirucalli</i>	Indian tree spurge, saptala	Euphorbiaceae	Latex	Euphorbon, Phorboids	Latex which cause reactions with the skin, mucous membranes and eyes. Severe burning and inflammation, Ingestion causes burning and irritation of the mouth and stomach, accompanied by pain and diarrhea
41	<i>Ficus elastica</i>	Indian Rubber Tree, Rubber Tree, RubberPlant	Moraceae	The sap of the plant	Furocoumarins, psoralens, ficin, sesquiterpenoid glucosides, and triterpines.	Exposure to the sap from the plant or leaves may produce contact dermatitis.
42	<i>Garcinia morella</i>	Kankushta, Indian Gambose	Clusiaceae	Latex	Morellinol, morellin	Nausea, abdominal pain, dizziness, diarrhea, weakness of muscles, abdominal cramps
43	<i>Gloriosa superba</i>	Superb lily, kalihari	Liliaceae	All parts, especially tubers and roots.	Gloriosine and Superbrine	Abdominal pain, bloody diarrhea, dehydration, respiratory difficulties, low blood pressure, mental status alteration, seizures, coma and finally death.
44	<i>Heliotropium indicum</i>	Indian Heliotrope	Boraginaceae	The whole plant is poisonous.	Pyrrolizidine alkaloids	Pulmonary hypertension veno-occlusive disease.
45	<i>Helleborus niger</i>	Christmas rose,	Ranunculaceae	All parts	Protoanemonine, Hellebrin and	Nausea, vomiting, diarrhea, burning of eyes mouth and throat, oral ulceration, gastroenteritis,

		Black Hellbore			Helleborein	hematemesis and bradycardia.
46	<i>Hyoscyamus niger</i>	Henbane, Khurasani ajwain	Solanaceae	Seed and Leaves	Hyoscyamine, scopolamine, Tropane	Dilated pupils, hallucinations, increased heart rate, convulsions, vomiting, hypertension and ataxia.
47	<i>Ilex vomitoria</i>	Indian Black Drink	Aquifoliaceae	fruit	Saponins.	Gastrointestinal symptoms of nausea, vomiting, abdominal cramping, and diarrhea, Allergic sensitization
48	<i>Ipomoea hederacea</i>	Kala daana, Indian jalap	Convolvulaceae	Seeds	Pharbitisin, Turpethin.	Nausea, vomiting, purgation, irritation and inflammation.
49	<i>Jatropha curcas</i>	Physic Nut, Danti	Euphorbiaceae	Seeds	Curcin	Nausea, vomiting, diarrhea, abdominal cramp, inflammation, twitching of muscles
50	<i>Jatropha multifida</i>	French physic Nut, Badi Danti	Euphorbiaceae	Seeds	Ricin	Nausea, vomiting, diarrhea, abdominal cramp, inflammation, twitching of muscles, tachycardia.
51	<i>Lantana camara</i>	Big sage, wild sage	Verbenaceae	Unripe berries	Lantadene	Gastrointestinal, including nausea, vomiting, abdominal cramping, and diarrhea. Severe toxicity may cause weakness, lethargy, large pupils, and respiratory depression.
52	<i>Lobelia cardinalis</i>	Cardinal Flower, Indian Pink	Campanulaceae	The whole plant is poisonous	Lobeline	Hypertension, large pupils, sweating and perhaps seizures. Severe poisoning produces coma, weakness, and paralysis that may result in death
53	<i>Lolium temulentum</i>	Darnel, poison ryegrass	Poaceae	Seed and seed heads	Temuline and loliine	Ataxia, giddiness, apathy, various abnormal sensations, mydriasis, nausea, vomiting, gastroenteritis, and diarrhea
54	<i>Narcissus sps</i>	Daffodil	Amaryllidaceae	Bulb and stem	Lycorine	Nausea, vomiting diarrhea. and blurred vision.
55	<i>Nerium oleander</i>	White oleander and Kaner	Apocynaceae	All parts	Nerioside, Oleandroside, Saponins.	Nausea, vomiting diarrhea, contact dermatitis, digestive upset, lock jaw and heart trouble.
56	<i>Nicotiana tabaccum</i>	Tobacco and tambaku	Solanaceae	All parts except ripe seeds	Anabasine, Nicotine	Pure nicotine have great level of toxicity, cause death because of paralysis. Angina, Techycardia, fibrillation and thrombo angitis obliterans.

57	<i>Papaver somniferum</i>	Opium poppy and afim	Papaveraceae	Petals, stem, seeds and ripe dried capsules	Morphine	A cold or clammy feel to the skin, Bluish hue in the fingertips and lips, Constricted pupils, Blurry vision, nausea, vomiting, irregular breathing, severe sleepiness, loss of consciousness and coma.
58	<i>Phytolacca americana</i>	Indian Polk	Phytolaccaceae	leaves and roots are poisonous.	Phytolaccatoxin and phytolaccigenin	Nausea, vomiting, abdominal cramping, and diarrhea occur, slow breathing, weakness, hypertension, severe convulsions and death.
59	<i>Plumeria alba</i>	Frangipani	Apocynaceae	Latex	Plumieride	In mouth leading to irritation and burning sensation if it goes into eyes. Vomiting and diarrhea.
60	<i>Podophyllum peltatum</i>	Devil's Apple, Indian Apple, May apple	Berberidaceae	The whole plant, except the fruit Leaves and rhizome	Podophyllotoxin and alpha- and beta-peltatin	Nausea, abdominal pain and severe, profuse, persistent diarrhea, extensive fluid depletion and electrolyte abnormalities, peripheral neuropathy, bone marrow suppression, and cardiovascular collapse tachypnoea, peripheral neuropathy, tachycardia, hypotension, ataxia, dizziness, lethargy, confusion, and altered sensorium. Seizures may occur, Thrombocytopenia and leucopenia
61	<i>Quercus sps</i>	Oak	Fagaceae	Leaves	Tannic acid	Gastroenteritis, heart trouble, contact dermatitis and kidney damage, depression, constipation and diarrhea
62	<i>Rhododendron sps</i>	Azaleas .	Ericaceae	leaves	Grayanotoxins, Andromedotoxin	Nausea, vomiting, breathing difficulties, coma, headache, muscular weakness and dimness of vision. Bradycardia and other cardiac dysrhythmias can be associated with severe blood pressure abnormalities.
63	<i>Ricinus communis</i>	Castor bean, Arandi	Euphorbiaceae	Entire plant especially seeds	Ricin, Ricinine RCA (Ricinus communis agglutinin).	Allergic dermatitis, rhinitis, and asthma, burning sensation, colicky abdominal pain, vomiting, diarrhea, haemorrhagic gastritis, dehydration, haematuria and acute renal and hepatic failure.
64	<i>Semecarpus anacardium</i>	Marking nut and bhilawa	Anacardiaceae	Juice	Bhilawanol	Allergic reactions like rash, itching and swelling. Renal failure due to hemodynamic effect.
65	<i>Semecarpus anacardium .</i>	Marking nut	Anacardiaceae	acid juice	semecarpol and bhilawanol	Irritation, inflammation, vesication, and ulceration. Ingestion causes blistering of the mouth and gastrointestinal distress, vomiting, abdominal pain, diarrhoea, hypotension, tachycardia, delirium, and coma. Pupils may be dilated

66	<i>Solanum nigrum</i>	Black night shade	Solanaceae	All part except the ripe fruit	Solanine	Gastrointestinal and neurological disorders, nausea, diarrhea, vomiting, stomach cramps, burning of throat, cardiac dysrhythmia, headache, dizziness, hallucinations, loss of sensations, paralysis, fever, jaundice, dilated pupils, hypothermia.
67	<i>Strophanthus gratus</i>	Strophanthus	Apocynaceae	Seeds	Strophanthine	Nausea, vomiting, giddiness, venesection, irregular heartbeat, hypertension and insomnia
68	<i>Strychnos nuxvomica</i>	Poison nut, Nuxvomica and kuchila	Loganiaceae	All parts especially seeds of ripe fruits	Strychnine, Brucine	Painful muscle spasm, loss of the ability to breathe followed by death. Fear and agitation, tight jaws, breathing difficulties and darkened urine.
69	<i>Swietenia mahagoni</i>	Mahogany	Meliaceae	Seeds	An unidentified toxin.	Vomiting, coma, bradycardia, and hypotension.
70	<i>Symphoricarpos orbiculatus</i>	Devil's Shoestring, Indian Currant	Caprifoliaceae	Berries	Saponin, and chelidone	Nausea, vomiting, abdominal cramping, and diarrhea
71	<i>Taxus baccata</i>	Graveyard tree, Taleespatra	Taxaceae	All parts specially fruits and seeds	Taxine.	Nausea, abdominal pain, dizziness, diarrhea, weakness of muscles, convulsion, delirium and collapse.
72	<i>Thevetia peruviana</i>	Yellow oleander and pila kaner	Apocynaceae	All parts especially leaves and fruits	Thevetin, thevetoxin, and peruvoside	Sinus bradycardia, premature ventricular contractions, Atrioventricular conduction defects or ventricular tachydysrhythmias.
73	<i>Veratrum album</i>	Indian Poke	Liliaceae	All parts	Veratrum	Vomiting, Diarrhea, prickling sensation, headache, muscular weakness, dimness of vision. Bradycardia, blood pressure abnormalities, Coma.

Conclusion and Discussion

There are more than 4000 species of medicinal plants growing as shrubs, herbs and trees in India, many of these plants are become poisonous when taken in large doses. In the present study, a review has been performed on most of the poisonous plants of India to report the basic details of the plants botanical names, common names, family, poisonous parts, toxic chemical constituents and the toxic effects. The salient features of some of the Indian traditional toxic plants have been summarized in Table 1. The overuse of the phytochemical constituents of medicinal plants may be harmful. The latex containing plants found in families of Apocynaceae, Araceae, Asclepiadaceae, Euphorbiaceae and Papaveraceae can be poisonous,

may cause serious illness and death may occur if left untreated. Many species of toxic plants has been reported from different plant families. Mostly the poisonous parts of toxic plants have been reported to be seeds, latex, root, root bark, fruits, stem, stem bark, tubers, bulbs and sometimes whole plant. The data regarding family of poisonous plants, its poisonous part and its active chemical constituents, may be useful in the classification of poisonous plants. The substances responsible for poisonings or toxic reactions originate from many different pathways within plants. However, most poisonous principles are considered to be secondary metabolites or by products from the essential functions of the plant. These are compounds that aren't considered fundamental to the life of the plant. Although there are many theories as to why plants produce these nonessential compounds, one of the key theories maintains that plants have evolved to produce these compounds in order to deter animals from grazing on them and to keep insects from eating them. There are some plants which have neither medicinal value nor edible.

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