WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.084
Volume 12, Issue 7, 97-111 Review Article SSN 2277– 7105

A REVIEW OF ATIVISHA (ACONITUM HETEROPHYLLUM WALL EX ROYALE) FROM THE AYURVEDIC AND PHARMACOLOGICAL PERSPECTIVES

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Article Received on
06 March 2023,

Revised on 27 March 2023,
Accepted on 17 April 2023

DOI: 10.20959/wjpr20237-27888

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ABSTRACT

Ativisha is Aconitum heterophyllum Wall ex Royale is a vital drug mentioned in Ayurveda. It has been mentioned in various formulations in the Classical texts of Ayurveda. It shows significant results in Diarrhoea. Deepan, Pachan karmas of Ativisha plays an important role in treating various diseases. It is a good tonic for gut health. Also it plays a major role to treat the paediatric patients. Such important drug in Ayurveda has been included in endangered species of Himalayan plants. We have tried to take a complete review of the drug and presenting through this article. This will help the researches to get all the information about the plants at a glance. The article include the information like references from Vedic period, *Brihattrayi*, *Nighantus* for *Gana*, Synonyms, Vernacular names, Therapeutic uses, etymological derivations, *Rasapanchakas*, Chemical Constituents, Taxonomical classification, Morphological characteristics, Conservation, Cultivation & Collection, A brief information about *Abhav Pratinidhi Dravya* i.e. Musta as Substitute for Ativisha And Pharmacological activities.

KEYWORDS: Ativisha, Aconitum heterophyllum, pharmacological activities.

INTRODUCTION

Many drugs in Ayurveda that plays a crucial role in maintain the health of human being. Ativisha is such a drug of choice in Paediatric care. Hence it has the synonym shishubaishajya. Being an alpine plant in Himalaya it has become endangered due to climate change and uncontrolled cultivation. Therefore the conservation becomes necessary in this case. The study presents complete review about Ativisha. The plant is common in the subalpine and alpine zone of the Himalaya from the Indus to Kumauni, from 6000 to 15000ft. It is helpful to gather all the information about the plant. Biennial, paired, tuberous roots, exhibited as white, yellow, red, & black varieties; the white is the best. Erect, simple or branched stem. Leaves are more or less heteromorphous glabrous or the upper sparingly pubescent on the nerves below. A slender raceme or a lax, leafy panicle, or in alpine specimens reduced to a few flowers, crisp-pubescent inflorescence. Though it is mentioned in toxic herb group, it is non-toxic. It is The plant is having Deepan, Paachan property. Paachan properties. Hence it is efficiently act as antidiarrheal drug Aconitum heterophyllum works well as a good aphrodisiac. It is an effective for infantile and paediatric fevers. This organic plant is regarded as the treatment for neuralgia in homeopathy. As an analgesic and nerve sedative, it is also helpful rheumatism, nervous pain, and other pains. The plant's root said to have calming effects on the heart and heart and nerves as well as the ability to manage hysteria.[1]

ATIVISHA

Historical Perspective

Vedic Period: (1500 - 500 BCE)

The herb Visa has been mentioned in Satapada Brahmana.[2] Sayana stated synonym of Visa as Visataki that indicates Visa and Ativisa are same.

Table I: Samhita Kaal: (300 - 500 BCE) Gana.

Brihattrayi & Nighantu	Varga
Charak Samhita[3]	Arshoghna Mahakashay
	Lekhaneeya Mahakashay
Sushrut Samhita[4]	Pippalyadi, Vachadi, Mustadi Gana
AshtangHriday[5]	Vatsakadi, Vachadi-Haridradi, Mustadi Gana
Shaligram Nighantu[8]	Haritakyadi Varga
Raj Nighantu[9]	Pippalyadi Varga
Dhanavantari Nighantu[10]	Guduchyadi Varga
Madanpal Nighantu[11]	Pratham Varga
Bhavprakash Nighantu[12]	Haritakyadi Varga
Nighantu Adarsh[13]	Vatsanabhadi Varga

Table II: Synonyms.[3,4,5,6,7,9,10,11,12,14]

	C.S	S.S	A.H	B.P	Sh.S.	Y.R	D.N	M.N.	R.N	S.N.	K.N.	B.N.
Ativisha	+	+	+	+	+	+	+	+	+	+	-	+
Aruna	-	-	-	+	-	-	-	-	+	+	+	+
Atisaraghni	-	-	-	-	-	-	+	-	-	+	-	-
Ardra	-	-	-	-	-	-	+	-	-	-	-	-
Balrognashini	-	-	-	-	-	-	+	-	-	-	-	-
Bhangura	-	-	-	+		+	-	+	+	+	+	+
Chandri	-	-	-	-	-	-	-	-	+	-	-	-
Ghuna	-	-	-	-	-	-	-	-	-	-	+	-
Ghunpriya	-	-	+	-	-	+	+	-	-	-	+	-
Ghunvallabha	-	-	+	-	-	-	-	-	-	+	-	+
Kashmira	-	-	-	-	-	-	-	-	-	+	-	-
Mahaushadh	-	-	-	-	-	-	-	-	-	+	-	-
Mrudvi	-	-	-	-	-	-	-	-	-	+	-	-
Madri	-	-	-	-	-	-	-	-	-	-	+	-
Pittavallabha	-	-	-	-	-	-	+	-	-	-	-	-
Prativisha	+	-	+	-	+	+	-	+	+	+	-	+
Shweta	-	-	-	-	-	-	+	-	-	+	-	-
Shrungika	-	-	-	-	-	-	-	-	-	+	-	-
Shrungi	-	-	-	-	-	-	+	+	+	+	+	+
Shwetkanda	-	-	-	-	-	-	-	-	+	+	-	-
Shyamkanda	-	-	-	-	-	-	-	+	+	+	+	-
Shuklakanda	-	-	-	-	-	-	+	+	-	+	+	+
Shishubhaishajya	-	-	-	-	-	-	-	-	-	-	-	-
Shokapaha	-	-	-	-	-	-	-	-	-	-	-	-
Shita	-	-	-	-	-	-	-	+	-	-	-	-
Sita	-	-	-	-	-	-	-	-	-	-	+	-
Mahaushadhi	-	-	-	_	-	-	-	-	+	-	-	-
Upavishanika	-	-	-	-	-	-	-	+	-	-	+	-
Upavisha	-	-	-	-	-	-	+	-	+	-	+	-
Vishada	-	-	-	-	-	-	+	-	-	-	-	-
Visha	-	-	+	+	-	+	+	+	+	+	+	+
Vishwa	-	-	-	-	-	-	+	-	+	+	+	-
Virupa	-	-	-	-	-	-	+	-	+	+	-	-
Vira	-	-	-	-	-	-	-	-	+	-	-	-
Vishwa	-	-	-	-	-	-	+	-	+	+	+	-
Virupa	-	-	-	-	-	-	+	-	+	+	-	-
Vira	-	-	-	-	-	-	-	-	+	-	-	-

Ativisha & Prativisha are the 2 synonyms of Ativisha mentioned in Charak Samhita.[3]

Sushruta has stated only one synonym i.e. Ativisha. [4]

Ativisha, Ghunpriya, Ghunvallabha & Prativisha are the 4 synonyms mentioned by Vagbhata.[5]

Therapeutic Uses[3,4,5]

It is used for the management of diseases of nervous system, digestive system, fever and rheumatism traditionally. The seeds are used as a diuretic. The leaves of Ativisha, mixed with rock salt are applied locally. The seeds along with honey are applied topically for soothing effect in tonsillitis. Simply inhalation of roots is highly beneficial in the management of headache. It is also effective in blood-pressure as its main constituent Atisine produces marked hypotensive effect. It is prescribed in malarial fevers as an adjuvant.

According to Acarya Charaka Ativisha Jvar, Prameh, Pandu, Kushtha, Urahkshat, Shvayathu, udar, Arsha, gulma, Visuchika, raktastrav, Atisaar, Grahani, Pravahika, Aanah, Aruchi, Kamala, Hrudrog, Kas, Shwas, Galrog Sushrut Samhita, In Chikitsasthan Ativisha is used in aamashaygatvaat, Kushtha, Vishamjvar, Hrudrog, Unmad, Apasmar, Pandu, Visarpa, Kandu, According to Vagbhata Ativisha is useful in Atisthaulya, Hrudrog, Kamala, Shwitra, Shwas, Kas, Galgrah, Buddhi, Smruti, agnimandya. In Sharirsthan Ativisha in combination used in Aamgarbhastrav, dosh strav and vedana shaman after abortion. In ChikitsasthaanJvar, Mandagni, Atisaar, Kshatkas, Hrudrog, Kaphajraktastrav, Pliha, Meh, Agnimandya, Arsha, Kushtha, atisaar, Grahani, Gudabhransh, Gudashool, Pravahika, Aam, Chhardi.

Kalpana[3,4]

There are Kashaykalpana, Ghrita, Tail, churnas, kshar, Fanta, Aasav- Arishta, Lepa, Yog of Ativisha included in Charak Samhita.

Very few formulations of Ativisha are included in Sushrut Samhita. Ativisha is included in kwathkalpana, kalka, ghrita, tail, churna, kshar, aasav, lepa, yog.

Kwathkalpana, kalkakalpana, Ghrita, Churnas, while Ativisha is included in Dhoop, Kshar, aasav, Leh, Peya, Bastikalpana for single time.

Kalpa[3,5]

Charakhas mentioned Ativisha in Vatsakadikashay, Pippalyadighrita, Trikantakadysneh, Lodhrasav. Kshargutika. Pippalyadikshar. Raktarodhakyog, Rhiberadighrita Sunishannakchangerighrita. Nagarady churna, Vachadi churna, Kiratadya churna, madhvarishta, Pippalmuladyakshar, Chaturthvatsakadikshar. Vishaladifanta, Nagaradi pey, Rasanjanadi churna, Shirishadi yog. Vachadi Churna, Katphaladikwath, katukadi kwath. Murvadiyog, Svarnakshiryadiyog in Urustambha Chikitsa. Bala tail, Mulakadya tail.

Pushyanug churna. Shaddharanyog. Mahatiktak Ghrita. Mahakushtha sneh. Tilvakghrita Vagbhata has included Ativisha in Mahatiktakghrita, Mahavajrakghrita.

Table III: Rasapanchak of Ativisha.[10,11,12,13,14]

	D.N	M.N.	K.N.	B.N.	N.A.
Ras :Katu	+	-	+	+	+
Tikta	+	+	+	+	+
Veerya :					
Ushna	+	+	+	+	+
Vipak : Katu	-	-	+	+	+
Guna : Laghu	-	-	+	-	-
DoshkarmaKapha	-	+	+	+	+
Pitta	-	+	+	+	+
Karma :Pachak	-	+	+	-	-
Agnideepan	-	-	+	-	-
Atisaarhar	+	+	+	+	-

According to BhavprakashKatu, Tikta rasa, Katuvipaki, Ushnaveerya, Laghu, Kaphapittahar, Agndeepan, Pachan, Aamdoshhar, Atisaarghni.

Etymological Derivations[10,12,15,16]

1. अतिविषा – Non-toxic, though grouped in toxic herb group. भावप्रकाशनिघण्टु
2. अरुणा – Its rhizome is reddish brown colour
3. काश्मीरा – Found in Himalayan region Paryayratnamala
4. माद्री - Grows in Madradesh अष्टङ्गनिघण्टु
5. शुक्लकन्दा - Having white tubers।भावप्रकाशनिघण्टु भगुंरा – Brittle| भावप्रकाशनिघण्टु
6. विश्वा – Gets absorbed rapidly in the body | भावप्रकाशनिघण्टु
7. विषा – Gets absorbed and spreads rapidly in the body | भावप्रकाशनिघण्टु
8. घुणप्रिया, घुणवल्लभा - Attracts worms easily।भावप्रकाशनिघण्टु
9. पितवल्लभा – Useful in Pittaroga| धन्वन्तरीनिघण्टु
10. शिशुभैषज्या – Useful medicinal herb for paediatric care | सोढलनिघण्टु
11. श्रृंगी – Its rhizome possesses horn-like projections. भावप्रकाशनिघण्टु

Table IV: Vernacular Names.[9]

Sanskrit :	Ativisha
Hindi :	Atees
Marathi :	Ativish
Bangali :	Ataich
Gujrathi:	Atalsani kali, Atavas
Karnatak :	Ativisha
Telugu :	Ativasa

Bheda[12]

3 Types of Ativisha has been mentioned

1. Shukla
2. Krushna
3. Aruna

Summary

Dravya name- Ativisha

Botanical name-*Aconitum heterophyllum*

Family- Ranunculaceae

Rasa- Katu, Tikta

Veerya- Ushna

Vipak- Katu

Guna- Laghu

Doshkarma- Kapha, Pitta

Prabhav: Vishahar

Action on Dhatu : Ras : Jvaraghna

Asthi, Majja : Shothhar

Meda : Lekhan, Deepan, Pachan

Action on Mala: Grahi

Action on Strotas: Annavaha: Deepan, Pachan, Agnideepan

Medovah: Medoghna

Table V: Taxonomical Classification of Aconitum heterophyllum.[17]

Superregnum:	Eukaryota Regnum: Plantae
Kingdom	Plantae
Division	Angiosperm
Subdivision	Magnoliophytina

Classis	Ranunculopsida
Subclassis	Ranunculidae
Natural order	Ranunculaceae
Genus	Aconitum

Kalpa[3]

Sudarshana churna, Balchaturbhadra churna, Rasnerandadikwatha and Panchatiktakaguggulu Ghrita, Shaddharan Churna. Mah¡vishagarbha Taila, Rodhrasava, Shva Gutika, Lakshminarayana Rasa, RasnairandadiKvatha Churna, Balchaturbhadrika churna.

Aconitum heterophyllum Wall[18]

Family : Ranunculaceae

Aconitum heterophyllum Wall. Cat.4722 (nomentatum) ;Royale Ill. Himal. (1834)

Roots : Biennial, paired, tuberous, daughter tuber cylendric to cylendric –oblong or conic,2-5cm. long 0.5-1.2cm. Thick (much smaller in weak or alpine specimens), bearing few root fibres which break off easily, bark very thin whitish or grey, smooth fracture pure white, farinaceous, cambium discontinuous, forming (usually 4 or 5) isolated, slender, cylindrical strands arranged in a ring; taste purely bitter; mother-tuber collapsed, deeply grooved and wrinkled, with conspicuous root-fibre scars. Innovation-bud of daughter-tuber conic, 3-8mm long.

The root is exhibited as white, yellow, red, & black varieties; the white is the best.

Stem: Erect, simple or branched, from 15-90cm. (rarely to almost 2m.) high, terete, glabrous below, finely crispo-pubescent in the upper part, internodes short.

Leaves: More or less heteromorphous glabrous or the upper sparingly pubescent on the nerves below; lowest on long (up to 13cm) petioles, blade orbicular-cordate or ovate-cordate in outline with a usually narrow sinus (1-1.5cm deep). Usually 5 lobed to the middle, lobes crenate or inciso-crenate, crenate rotundate, apiculate.

Intermediate leaves: Shortly petioled or sessile, ovate-cordate often acuminate, 3.5-12cm long, 2.5-7.5cm. broad.

Inflorescence: A slender raceme or a lax, leafy panicle, or in alpine specimens reduced to a few flowers, crispo-pubescent.

Floral leaves: Like the preceding infrafloral leaves, but smaller, passing upwards into the rapidly decreasing ovate or lanceolate, crenate or (the uppermost) entire bracts.

Bracteoles: If present, at or above the middle of the pedicel, elliptic or oblong usually entire;
Pedicels erect: in the mature state often adpressed to the rhachis, lower up to 5 cm. long, upper much shorter.

Sepals: More or less blue or violet, rarely whitish, with dark conspicuous veins.
Carpels: 5, contiguous elliptic-oblong, shortly contracted into the slightly shorter style, crispo-pubescent with adpressed hairs. Follicles contiguous, linear-oblong, straight.

Distribution

Common in the subalpine and alpine zone of the Himalaya from the Industo Kumaon, from 6000 to 15000ft.

DESCRIPTION

a) Macroscopic

Internally starch white, external surface wrinkled marked with scars of fallen rootlet, and with a rosette of scaly primitive leaves on top. Roots, ovoid-conical, tapering downward to a print, 2.0-7.5 cm long, 0.4-1.6 cm or more thick at its upper extremity, gradually decreasing in thickness towards tapering end. Short, starchy fracture with uniform white surface and 4–7 concentrically spaced yellowishbrown spots at the centre, which correspond to the ends of f ibrovascular bundles traversing theirroot longitudinally; bitter taste; no tingling sensation.

Microscopic

Transverse section of mature root shows, single layered epidermis consisting of light brown tabular cells rupturing on formation of cork, cork consists of 5-10 rows of tangentially elongated, thin-walled cells, cork cambium single layered consisting of tangentially elongated, thin-walled cells, cortex much wider consisting of tangentially elongated or rounded, thin-walled parenchymatous cells with intercellular spaces, cells 27 fully packed with both simple as well as compound starch grains, compound starch gains composed of 2-4 components of spherical body, endodermis distinct composed of barrelshaped cells, elements of vascular bundles poorly developed, vascular bundles, arranged in a ring, inter-fascicular cambium present in form of a ring composed of few layered thin-walled cells, central core

consisting of thin-walled parenchymatous cells, possessing starch grains similar to those found in cortical cells.

Drug Dose

0.6-2.0 g of the drug in powder form

Pharmacological Activity

According to Ayurvedic pharmacology, ativisha has tikta (bitter) and katu (pungent) taste, laghu (light) and ruksha (dry) properties, ushnaveerya (hot potency) and katuvipaka (attains pungency after digestion). In terms of actions, it is kapha-pittahara (reduces kapha and pitta doshas), dipana (increases digestive fire), pachana (digests undigested material), grahi (prevents water loss from the body), shothahara (anti- inflammatory), vishaghana (anti poisonous), krimihar (anthelmintic), arshoghna (antihemorrhoid), jwarahara (anti-pyretic), Kasahara (anti-tussive) and atisaraghna (anti-diarrheal).

Anti-Inflammatory[19,31]

Verma et al. evaluated the anti-inflammatory properties of A. heterophyllum using the wellknown cotton pellet induced granuloma method. They demonstrated that the ethanolic extract of A. heterophyllum tuber has antiinflammatory properties, supporting the traditional medicinal use of shotha/shophahara karma with scientific data (antiinflammatory action). So, the study was useful in presenting the rational support for Shothahara/Shophahara karma. According to literature, plants that contain these chemicl groups of chemicals have strong antiinflammatory effects by blocking prostaglandin pathways (Patwardhan and Hopper, 1992). In advance of this, the findings of the current study show that an ethanolic root extract of A. heterophyllum has the potential to reduce subacute inflammation by blocking the metabolism of arachidonic acid. The current study's findings provide a scientific justification for the conventional beliefs.

Anti-Pyretic Action[20]

The aqueous, chloroform and hexane extracts of roots of A. heterophyllum were used to examine Antipyretic activity of Aconitum heterophyllum Wall Ex Royale. Aspirin was utilised as a benchmark antipyretic drug for comparison during the study's yeast induced pyrexia procedure. According to these investigations by Ikrum, the extracts displayed negligible antipyretic action and were safe (up to 1.6 g/kg). A. heterophyllum is however

given like a powder (churna) as well as a decoction (kashaya) in Ayurveda in order to control fever.

Immuno-Modulatory Action[21]

In addition to other medicines from the Ayurvedic and Unani systems of medicine, the ethanolic extract of A. heterophyllum tubers was employed to research the immunomodulatory effects on delayed hypersensitivity hypersensitivity (DTH), humoral reactions to sheep red blood cells, skin allogeneic refusal, and cell lysis of the reticuloendothelial system in mice. The humoral element of immunity The results of these initial studies show that A. heterophyllum has immunomodulatory activity, which might result in the creation of new herbal immunomodulating drugs.

Action on Nervous System[22]

A. heterophyllum has the capacity to increase the sympathetic nervous system's receptivity to physiological stimuli, as demonstrated by Hamet. While atisine had a hypotensive effect at every dose examined, the plant extract as a whole displayed hypertensive properties, the researcher discovered. The stimulation of the sympathetic nervous system was thought to be the cause of the hypertension brought on by high dosages of aqueous extract. The roots of A. heterophyllum yielded two new diterpenoid alkaloids called heterophyllinines A and B, which were about 13 times more selective than acetylcholinesterase in inhibiting butyrylcholinesterase. These enzymes help nerve impulses get from one place to another. A. heterophyllum has the capacity to increase the sympathetic nervous system's receptivity to physiological stimuli, as demonstrated by Hamet. While atisine had a hypotensive effect at every dose examined, the plant extract as a whole displayed hypertensive properties, the researcher discovered. The stimulation of the sympathetic nervous system was thought to be the cause of the hypertension brought on by high dosages of aqueous extract. The roots of A. heterophyllum yielded two new diterpenoid alkaloids called heterophyllinines A and B, which were about 13 times more selective than acetylcholinesterase in inhibiting butyrylcholinesterase. These enzymes help nerve impulses get from one place to another.

Anti-Hyperlipidimic Activity[23]

According to a study, the methanolic extract of A. heterophyllum tubers had a hypolipidemic effect on obese rats given a diet. The inhibition of Hydroxymethylglutarate Coenzyme A reductase (HMGR) and the activation of Lecithincholesterol Acyltransferase were found to be the two mechanisms responsible for the pharmacological action. This supported the

designation of ativisha as a lekhaneya (scrapping) agent by lowering blood serum levels of total cholesterol, low-density lipoprotein cholesterol (LDLc), triglycerides, and apolipoprotein B, decreasing intestinal fat absorption, and increasing levels of high-density lipoprotein cholesterol (HDLc) and apolipoprotein A. It is important to note that statins and fibrates are two popular groups of chemicals used in contemporary medicine to manage hyperlipidemia. The first controls HMGR, and the second controls HDLLDL ratios. A. hetrophyllum is active at both levels, making it potentially effective against hyperlipidemia.

Antibacterial[24]

Previously, heterophyllisine, heterophylline, heterophyllidine, heteratisine, atisine, atidine, F-dihydroatisine, hetisine, benzoylheteratisine and atisenol were reported from A. heterophyllum.[8–11] In the present paper, we describe the isolation and structure elucidation of two new antibacterial norditerpenoid alkaloids 6-Dehydroacetylsepaconitine (1) and 13-hydroxylappaconitine (2), along with three known alkaloids lycoctonine (3), delphatine (4) and lappaconitine (5).

1.6-dehydroacetylsepaconitine, 2. 13-hydroxylappaconitine, 3. N-acetylsepaconitine, 4. delphatine 5. Lappaconitine. Compounds 1 and 2 showed significant antibacterial activity against Staphylococcus aureus. Compound 3 showed significant activities against Salmonella typhi and Pseudomonas aeruginosa, while compounds 4 and 5 showed significant activity against Salmonella typhi and Pseudomonas aeruginosa (Ref- Norditerpenoid alkaloids).

Antioxidant and Nephro-protective Activitiy[25]

In another study it is reported that root extract of Ativisha had antioxidant and Nephroprotective activity in Glycerol Induced Acute Renal Failure in Rats. In the study it was revealed that in- vitro antioxidant activity was found to be equal to Vitamin C and in an in vivo study root extract treated animals showed significant attenuation of biochemical parameters and histopathological changes of the kidney as compared to glycerol treated group.

Antidiarrhael activity[26]

In another study, Ativisha is reported with antisecretory and antimotility effect of which mediates through nitric oxide path way and thus proves its use in Ayurveda as anti-diarrheal drug. The results showed reduction in normal fecal output after 5th and 7th h of treatment in the study. It also showed significant activity in other parameters like small intestinal transit,

fluid accumulation, and PGE_2-induced enteropooling models, which restored the altered biochemical parameters as well as prevented Na(+) and K(+) loss.

Pediatric care[27]

Special use in pediatrics ailments: The drug holds a special position in Kaumarbhritya specialty, it is also referred as "Sishubhaishjaya" (best remedy for children) due to its common use in treatment of various diseases in children like fevers, diarrhea, indigestion, inflammation, helminthiasis and hyperlipidemia. Ativisha is one of the primary constituents in several of the popular multi-drug compositions used in kaumarbhritya, including Sudarshana Churna, Balchaturbhadra Churna, Rasnerandadikwatha, and Panchatiktakaguggulughrita.

Anticonvulsant[28]

The chloroform extract of Aconitum heterophyllum can be used as an adjuvant therapy again st cognitive deficit in convulsions and delayed the start and shortened the duration of convulsi ons in MES and PTZ-induced convulsion models.

The extract also shows a significant decrease in lipid peroxidation levels and a rise in reduced glutathione levels, demonstrating substantial antioxidant activity of chloroform extract of Ac onitum heterophyllum.

DISCUSSION

Ativisha, which are referenced in traditional sources, are very effective in curing a wide range of illnesses. Although it was briefly described in classical sources, this medication is used in many different forms nowadays. Many Ayurveda formulations contain Aconitum Heterophyllum (A. Heterophyllum), which is also a key component of Chinese and Bhutanese herbal remedies. Roots contain alkaloids, of which atisin makes up 0.4% and is considerably less poisonous than aconitine and pseudo aconitine. The herb has strong immune-stimulating qualities. Due to the presence of its bonded phytoconstituents, the majority of aconitum species are extremely poisonous. The herb has strong immune-stimulating qualities. Due to the presence of its bonded phytoconstituents, the majority of aconitum species are extremely poisonous. When formulated into a medicine, however, Ativisha's phytochemical components assist in balancing its poisonous characteristics. Ativisha's pharmaceutical effects included anti-inflammatory, antipyretic, and antibacterial properties. It is used after a fever, in dyspepsia, cough, diarrhoea, and irritability from

stomach and abdominal pain. Recent research has demonstrated the potent antimicrobial activity of A. heterophyllum against gram-negative bacteria. good antimicrobial activity against gram negative bacteria.

CONCLUSION

The literature on Ativisha is reviewed in-depth in this article. Ayurveda and numerous other conventional medical systems both use Ativisha in an efficient and secure manner. Alexipharmic, anodyne, anti-atrabilious, anti-flatulent, anti-periodic, anti-phlegmatic, carminative, anti-oxidative, anti-inflammatory, and expectorant are only a few of its medical qualities. When handled carefully, this plant can be beneficial for treating a variety of ailments.

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