

A lexical review on *Vishaghna Dravyas* of Kaideva Nighantu

Sunita Yadav, Anita Sharma, Rinkesh Vishnoi, Jyoti Rani

Department of Agad Tantra and Vidhi Vaidyaka, NIA, Jaipur, Rajasthan, India

Abstract

Introduction: Agad Tantra being the unique branch that deals with toxicology and its management enlists several antitoxic drugs used for various poisonings. Ancient texts comprise the list of a wide range of traditional medicines, but they are not explored due to lack of incomprehension. **Aims:** The review has been written with the aim to dig out the hidden knowledge of *Vishaghna Dravyas* (alexeterics) mentioned in Kaiydeva Nighantu. **Materials and methods:** This *Nighantu* was written in the 15th century A. D. by Kaiydeva with the name “*Pathya-Apathya-Vibodhaka*” it comprising of total 514 *Dravyas* out of which 175 drugs possess *Vishagna* (anti-poisonous) property. **Results:** These *Vishaghna Dravyas* (alexeterics) have been distributed based on various *Vargas* (classes) which is described as 121 belonging to *Aushhada Varga* (drug class) as single drugs and four as groups, total of 16 from *Dhatu Varga* (metal class) as single drugs and one as compound or as a group, 9 from *Dhanya Varga* (cereal class) as a single drug, 15 in *Dravya Varga* as single drugs, and 5 as compound or as a group. Two each in *Kritana Varga* and *Vihara Varga* and one in *Mansa Varga* as compound or as a group. Out of all the 175 *Vishagna Dravyas* (alexeterics), 18 *Dravyas* (substances) are specific indications in combating particular types of envenomation or poisoning conditions. **Conclusion:** All the abovementioned drugs are screened for the purpose of revalidation to bring out their therapeutic utility.

Keywords: Kaiydeva Nighantu, *Vargas*, *Vishaghna Dravya*

Introduction

Herbal medicines are a regional tradition with worldwide importance.^[1] India is a mega-diverse country that is home to roughly 10% of all species in the world.^[2] It has fostered a rich cultural heritage over the course of several thousands of years. *Agad Tantra* has been described among one of the eight clinical branches (*Ashtanga*) mentioned in the Ayurvedic text which deals with the study of poisons, their clinical features, diagnosis of cumulative toxicity, and treatment. Various ancient text comprises several new herbs which have not been recognized and are of great importance. The word *Nighantu* has been derived from the word *Nighudh Artha* (hidden meaning). In the classical Ayurvedic literature, various *Nighantu* has been written for understanding the new herbs and their properties, part used therapeutic actions. Kaiydeva Nighantu is believed to be composed in the 15th century AD. it comprises total of nine *Vargas* (classes) out of which only eighth are available and in total 514 *Dravyas* (substances).^[3] The review has been written from Kaiydeva Nighantu which is also called as *Patya-Apathya-Vibodhaka* though it is famous with the name of its writer. It has been written with

the intention to maintain an individual’s health and cure disease by emphasizing on proper *Pathya Apatya*. The 8 *Vargas* (classes) mentioned in the *Nighantu* has been serialized as *Aushadhi Varga* (medicinal herbs), *Dhatu Varga* (minerals class), *Dhanya Varga* (cotyledons and legumes), *Drava Varga* (liquids class), *Kritana Varga* (rice preparations), *Mamsa Varga* (flesh foods), *Vihara Varga* (routine activities), *Mishraka Varga* (miscellaneous). A, Out of these eight *Vargas*, one and two are related to *Aushada* (drugs), three–six are related to *Anna* (food), seven are related to *Vihara* (activities), and eight consists of Mishra part which comprises of topics other than mentioned previously.^[4] It is an attempt for collective classification of *Vishaghna Dravyas* (anti-poisonous substance) mentioned in the *Nighantu* based on their herbal, mineral, and animal origins belonging to different *Vargas* (chapter-wise classification).

Address for correspondence: Dr. Sunita Yadav,
Department of Agad Tantra and Vidhi Vaidyaka, NIA, Jaipur - 302 002,
Rajasthan, India.
E-mail: sun.yad1215@gmail.com

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow_reprints@wolterskluwer.com

How to cite this article: Yadav S, Sharma A, Vishnoi R, Rani J. A lexical review on *Vishaghna Dravyas* of Kaideva Nighantu. *AYU* 2022;43:45-53.

Submitted: 29-Jul-2022

Revised: 09-Mar-2023

Accepted: 20-Mar-2023

Published: 02-Aug-2023

Access this article online

Quick Response Code:



Website:
www.ayujournal.org

DOI:
10.4103/ayu.ayu_199_22

Table 1: *Vishaghana Dravyas* (alexeterics) of *Aushadhi Varga* (medicinal herbs)

Drug name	Botanical source	Action	References
<i>Shaalparni</i>	<i>D. gangeticum</i> . DC.	<i>Vishapaha</i>	P.- 12 , Ver.- 46
<i>Yashtimadhu</i>	<i>G. glabra</i> Linn.	<i>Vishapaha</i>	P.- 22 , Ver.- 103
<i>Nirgundi</i>	<i>V. negundo</i> Linn.	<i>Vishapaha, Vishanashaka</i>	P.- 27 , Ver.- 128
<i>Haritaki</i>	<i>T. chebula</i> Retz.	<i>Garaha</i>	P.- 45 , Ver.- 226
<i>Bhumyamlaki</i>	<i>P. niruri</i> Linn.	<i>Vishapha</i>	P.- 49 , Ver.- 250
<i>Pracheenamalakam</i>	<i>F. cataphracta</i> Roxb.	<i>Garapaha</i>	P.- 50 , Ver.- 252
<i>Nimbuka</i>	<i>C. medica</i> var. <i>acida</i>	<i>Vishadhavanshi</i>	P.- 62 , Ver.- 328
<i>Kareera</i>	<i>C. aphylla</i> Roth.	<i>Garaha</i>	P.- 70 , Ver.- 378
<i>Kapitha</i>	<i>F. elephantum</i> Correa	<i>Vishahanti</i>	P.- 78 , Ver.- 418
<i>Kakodumbara</i>	<i>F. hispida</i> Linn.	<i>Vishajita</i>	P.- 82 , Ver.- 451
<i>Peelu</i>	<i>S. persica</i> Linn.	<i>Garaha</i>	P.- 83 , Ver.- 454
<i>Neepa</i>	<i>A. cadamba</i> Mig.	<i>Garaha</i>	P.- 89 , Ver.- 486
<i>Katutumbi</i>	<i>L. vulgaris</i> Ser.	<i>Vishapaha</i>	P.- 98 , Ver.- 543
<i>Koshataki</i>	<i>L. acutangula</i> Roxb.	<i>Garajayeta</i>	P.- 109 , Ver.- 57
<i>vandhyakarkotaki</i>	<i>M. dioica</i> Roxb.	<i>Vishanuta</i>	P.- 109 , Ver.- 597
<i>Vishamushti</i>	<i>A. conyzoides</i> Linn.	<i>Mooshika Vishama</i>	P.- 110 , Ver.- 601
<i>Shleshmataka</i>	<i>C. myxa</i> Roxb.	<i>Vishanuta</i>	P.- 112 , Ver.- 615
<i>Vyagrataka</i>	<i>C. zeylanica</i> Linn.	<i>Vishahara</i>	P.- 112 , Ver.- 615
<i>Kalshaka</i>	<i>C. capsularis</i> Linn.	<i>Garaha</i>	P.- 115 , Ver.- 630
<i>Tanduliya</i>	<i>A. spinosus</i> Linn.	<i>Vishaghana</i>	P.- 115 , Ver.- 632
<i>Shwetamarsa</i>	<i>A. blitum</i> Var. <i>oleracea</i> Duthie	<i>Vishahanti</i>	P.- 116 , Ver.- 634
<i>Paalankya</i>	<i>S. oleracea</i> Linn.	<i>Vishapaha</i>	P.- 119 , Ver.- 646
<i>Loni</i>	<i>P. quadrifida</i> Linn.	<i>Vishanashaka</i>	P.- 120 , Ver.- 649
<i>Phanji</i>	<i>R. ornate</i> Chois	<i>Vishapaha</i>	P.- 121 , Ver.- 180
<i>Dry Mulaka</i>	<i>R. sativus</i> Linn.	<i>Vishajita</i>	P.- 124 , Ver.- 673
<i>Patha</i>	<i>C. pareira</i> Linn.	<i>Vishahara</i>	P.- 125 , Ver.- 679
<i>Kasamarda</i>	<i>C. occidentalis</i> Linn.	<i>Vishapaha</i>	P.- 126 , Ver.- 683
<i>Chakramarda</i>	<i>C. tora</i> Linn.	<i>Vishajita</i>	P.- 130 , Ver.- 703
<i>Kakajhangha</i>	<i>P. bicalyculata</i> (Retz.) Nees	<i>Vishahanti</i>	P.- 132 , Ver.- 713
<i>Bramhi</i>	<i>C. asiatica</i> Urban.	<i>Vishanuta</i>	P.- 133 , Ver.- 723
<i>Meshashringi</i>	<i>G. sylvestre</i> R. Br.	<i>Vishahanti</i>	P.- 136 , Ver.- 738
<i>Shigru</i>	<i>M. pterygosperma</i> Gaertn	<i>Vishahanti</i>	P.- 138 , Ver.- 745
<i>Hanspadi</i>	<i>A. lunulatum</i> Burm.	<i>Vishahanti</i>	P.- 141 , Ver.- 767
<i>Nagini</i>	<i>C. oblongifolius</i> Roxb.	<i>Vishahanti</i>	P.- 142 , Ver.- 770
<i>Nakuli</i>	<i>R. serpentina</i> Benth. ex kurz	<i>Sarpa, Luta, Vrishchika, Aakhu Visha</i>	P.- 143 , Ver.- 777
<i>Nagdamni</i>	<i>A. indica</i> Linn.	<i>Sarpa Luta Visha</i>	P.- 144 , Ver.- 789
<i>Murva</i>	<i>M. tenacissima</i> W. and A.	<i>Vishaghana</i>	P.- 145 , Ver.- 787
<i>Neelini</i>	<i>I. tinctoria</i> Linn.	<i>Vishapaha</i>	P.- 146 , Ver.- 792
<i>Gunja</i>	<i>A. precatorius</i> Linn.	<i>Vishahanti</i>	P.- 148 , Ver.- 796
<i>Devadaali</i>	<i>L. echinata</i> Roxb.	<i>Vishapaha AkhuVisha</i>	P.- 148 , Ver.- 798
<i>Shaal</i>	<i>S. robusta</i> Gaertu. f.	<i>Vishapaha</i>	P.- 151 , Ver.- 809
<i>Bhurja</i>	<i>B. utilis</i> D. Don.	<i>Vishahara Vishanuta</i>	P.- 153 , Ver.- 818
<i>Ashvakarna</i>	<i>D. alatus</i> Roxb.	<i>Vishahanti</i>	P.- 157 , Ver.- 845
<i>Inguda</i>	<i>B. roxburghii</i> Planch.	<i>Vishahanti</i>	P.- 161 , Ver.- 866
<i>Kinihi</i>	<i>A. procera</i> Roxb. Benth.	<i>Vishahanti</i>	P.- 161 , Ver.- 870
<i>Katambhar</i>	<i>M. koenigii</i> Linn.	<i>Vishahanti</i>	P.- 162 , Ver.- 872
<i>Nimba</i>	<i>A. indica</i> A. Juss.	<i>Vishanuta</i>	P.- 163 , Ver.- 883
<i>Rohitaka</i>	<i>T. undulata</i> Seena.	<i>Vishapaha</i>	P.- 169 , Ver.- 916
<i>Saptala</i>	<i>E. dracunculoides</i> Lam.	<i>Vishahara</i>	P.- 170 , Ver.- 924
<i>Snuhi</i>	<i>E. neriifolia</i> Linn.	<i>Visha and Dushi Vishahara</i>	P.- 170 , Ver.- 920
<i>Ankota</i>	<i>A. salvifolium</i> Linn. f. Wang.	<i>Vishahanti, Akhu Visha</i>	P.- 171 , Ver.- 927
<i>Kumpillaka</i>	<i>M. philippinensis</i> Muell. Ars.	<i>Vishaha</i>	P.- 175 , Ver.- 950
<i>Kadamba</i>	<i>A. cadamba</i> Miq.	<i>Vishahanti</i>	P.- 176 , Ver.- 957
<i>Karanja</i>	<i>P. pinnata</i> Linn. Merr.	<i>Vishajita</i>	P.- 179 , Ver.- 968

Contd...

Table 1: Contd...

Drug name	Botanical source	Action	References
<i>Shirisha</i>	<i>A. lebbeck</i> Benth.	<i>Vishahanti</i>	P.- 180, Ver.- 975
<i>Sarivakrishna</i>	<i>C. buchanani</i> Roem and Schult	<i>Vishapaha</i>	P.- 184, Ver.- 995
<i>Aavartaki</i>	<i>C. auriculata</i> Linn.	<i>Vishapaha, Vishahara</i>	P.- 184, Ver.- 998,1000
<i>Markandika</i>	<i>C. angustifolia</i> Linn.	<i>Vishghana</i>	P.- 185, Ver.- 46 Page number-185 Verse-1002
<i>Danti</i>	<i>B. montanum</i> Muell-Arg.	<i>Garapaha</i>	Page number-184 Verse-1014
<i>Swarnakshiri</i>	<i>E. thomsoniana</i> Boiss.	<i>Vishjita</i>	Page number-189 Verse-1021
<i>Indravaruni</i>	<i>C. colocynthis</i> Schard.	<i>Vishahara</i>	Page number-190 Verse-1028
<i>Rasna</i>	<i>P. lanceolata</i> olive. and Hiern.	<i>Vishahanti</i>	Page number-193 Verse-1043
<i>Ashvagandha</i>	<i>W. somnifera</i> Dunal	<i>Vishahanti</i>	Page number-193 Verse-1046
<i>Sahachara</i>	<i>B. cristata</i> Linn.	<i>Vishajita</i>	Page number-194 Verse-1050
<i>Hapusha</i>	<i>J. communis</i> Linn.	<i>Vishdushani</i>	Page number-197 Verse-1069
<i>Dhataki</i>	<i>W. fruticosa</i> Kurz.	<i>Vishaghana</i>	Page number-198 Verse-1073
<i>Apraajita</i>	<i>C. ternatea</i> Linn.	<i>Vishapaha</i>	Page number-199 Verse-1080
<i>Babula</i>	<i>A. arabica</i> Willd.	<i>Vishapaha</i>	Page number-201 Verse-1089
<i>Kokilaksha</i>	<i>H. spinosa</i> T. And.	<i>Vishapaha</i>	Page number-201 Verse-1092
<i>Shankhadhara</i>	<i>E. fluctuans</i> Lour.	<i>Vishahanti</i>	Page number-205 Verse-1112
<i>Haridra</i>	<i>C. longa</i> Linn.	<i>Vishajita</i>	Page number-206 Verse-1115
<i>AtiVisha</i>	<i>A. heterophyllum</i> Wall.	<i>Vishajita</i>	Page number-207 Verse-1120
<i>Lodhra</i>	<i>S. racemosa</i> Roxb.	<i>Vishahanti</i>	Page number-208 Verse-1127
<i>Kataka</i>	<i>S. potatorum</i> Linn.	<i>Vishahanti , Vishanuta</i>	Page number-211 Verse-1141, 1055
<i>Chavya</i>	<i>P. chaba</i> Hunter.	<i>Garapaha</i>	Page number-217 Verse-1174
<i>Chandana</i>	<i>S. album</i> Linn.	<i>Vishanuta</i>	Page number-238 Verse-1267
<i>Tagara</i>	<i>V. wallichii</i> DC.	<i>Vishapaha</i>	Page number-236 Verse-1276
<i>Karpura</i>	<i>C. camphora</i> Nees and Eberm.	<i>Vishapaha</i>	Page number-238 Verse-1287
<i>Kasturi</i>	<i>A. moschatus</i> Medik.	<i>Vishaha</i>	Page number-239 Verse-1292
<i>Marjaari</i>	<i>Civet</i>	<i>Vishanuta</i>	Page number-240 Verse-1300
<i>Kushtha</i>	<i>S. lappa</i> C.B. Clarke	<i>Vishajita</i>	Page number-244 Verse-1319
<i>Elavaluka</i>	<i>P. cerasus</i> Linn.	<i>Vishahanti</i>	Page number-245 Verse-1325
<i>Jaavitari</i>	<i>M. fragrans</i> Houutt.	<i>Vishapaha</i>	Page number-246 Verse-1330
<i>Lavanga</i>	<i>S. aromaticum</i> Linn.	<i>Vishahanti</i>	Page number-247 Verse-1334

Contd...

Table 1: Contd...

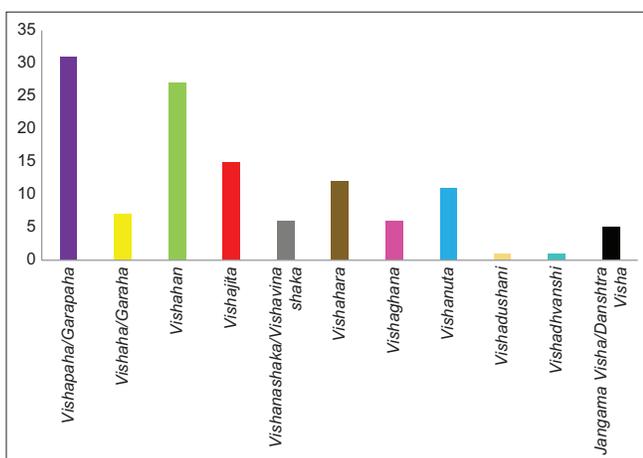
Drug name	Botanical source	Action	References
<i>Nagakerasa</i>	<i>M. ferrea</i> Linn.	<i>Vishapaha</i>	Page number-249 Verse-1347
<i>Renuka</i>	<i>V. negundo</i> Linn.	<i>Vishanuta</i>	Page number-250 Verse-1351
<i>Priyangu</i>	<i>C. macrophylla</i> vahl.	<i>Vishaghana</i>	Page number-251 Verse-1355
<i>Paripelava</i>	<i>O. indicum</i> (L.) Benth. ex Kurz	<i>Vishapranuta</i>	Page number-252 Verse-1361
<i>Jatamansi</i>	<i>N. jatamansi</i> DC.	<i>Vishnuta</i>	Page number-253 Verse-1364
<i>Usheera</i>	<i>V. zizanioides</i> Linn.	<i>Vishahanti</i>	Page number-254 Verse-1370
<i>Granthiparni</i>	<i>L. nepetifolia</i> (L.) R.Br.	<i>Vishanashaka</i>	Page number-258 Verse-1395
<i>Sprikka</i>	<i>D. zalil</i> Aitch. and Hemsl.	<i>Vishanashaka</i>	Page number-259 Verse-1397
<i>Padmaka</i>	<i>P. pudum</i> Roxb. Ex Wall.	<i>Vishapaha</i>	Page number-260 Verse-1402
<i>Manjishtha</i>	<i>R. cordifolia</i> Linn.	<i>Vishapaha</i>	Page number-264 Verse-1426
<i>Parpati</i>	<i>P. cablin</i>	<i>Vishahanti</i>	Page number-265 Verse-1429
<i>Laksha</i>	<i>L. lacca</i> Kerr.	<i>Vishanashaka</i>	Page number-266 Verse-1435
<i>Sthalakamala</i>	<i>H. mutabilis</i> Linn.	<i>Vishapaha</i>	Page number-266 Verse-1437
<i>Kamalakesara</i>	<i>N. nucifera</i> Gaertn.	<i>Vishajita</i>	Page number-270 Verse-1458
<i>Mallika</i>	<i>J. sambac</i> Ait	<i>Vishahara</i>	Page number-272 Verse-1472
<i>Malati</i>	<i>J. grandiflorum</i> Linn.	<i>Vishajita</i>	Page number-273 Verse-1474
<i>Shankhini</i>	<i>A. paniculata</i> (Burm.f.) Nees	<i>Vishapaha</i>	Page number-622 Verse-1491
<i>Shankhapushpi</i>	<i>C. pluricaulis</i> Chois.	<i>Vishahara</i>	Page number-622 Verse-1496
<i>Champaka</i>	<i>M. champaca</i> Linn.	<i>Vishahanti</i>	Page number-623 Verse-1500
<i>Ashoka</i>	<i>S. indica</i> Linn.	<i>Vishajita</i>	Page number-623 Verse-1503
<i>Bakula</i>	<i>M. elengi</i> Linn.	<i>Vishapaha</i>	Page number-626 Verse-1514
<i>Buka</i>	<i>O. fragrans</i> Lour.	<i>Vishapaha</i>	Page number-626 Verse-1516
<i>Kunda</i>	<i>J. pubescence</i> Wild.	<i>Vishapaha</i>	Page number-627 Verse-1519
<i>Muchukunda</i>	<i>P. acerifolium</i> Wild.	<i>Vishanashaka</i>	Page number-627 Verse-1520
<i>Japa</i>	<i>H. rosa-sinensis</i> Linn.	<i>Vishapaha</i>	Page number-627 Verse-1522
<i>Sindoori</i>	<i>B. orellana</i> Linn.	<i>Vishahanti</i>	Page number-628 Verse-1524
<i>Arka</i>	<i>C. procera</i> R.Br.	<i>Vishahara</i>	Page number-630 Verse-1534
<i>Alarka</i>	<i>C. gigantea</i> (Linn.) R.Br. ex Ait.	<i>Vishahara</i>	Page number-630 Verse-1534
<i>Peetakarveera</i>	<i>C. thevetia</i> L.	<i>Vishapaha</i>	Page number-631 Verse-1544

Contd...

Table 1: Contd...

Drug name	Botanical source	Action	References
Dhatura	<i>D. stramonium</i> Linn.	Vishapaha	Page number-632 Verse-1547
Tulsi	<i>O. sanctum</i> Linn.	Vishajita	Page number-633 Verse-1555
Phanijjaka	<i>O. majorana</i> L.	Vishanuta	Page number-634 Verse-1559
Arjaka	<i>O. pallidus</i> Royle.	Vishaghna	Page number-634 Verse-1562
Sumukha	<i>O. basilicum pilosum</i>	Vishahara	Page number-635 Verse-1564
Damanaka	<i>A. vulgaris</i> Linn.	Vishahanti	Page number-636 Verse-1470
Marubaka	<i>O. majorana</i> Linn.	Vishahanti	Page number-636 Verse-1472
Gajakarni	<i>L. macrophylla</i> Horn.	Vishajita	Page number-647 Verse-1634

D. gangeticum: *Desmodium gangeticum*, *G. glabra*: *Glycyrrhiza glabra*, *T. chebula*: *Terminalia chebula*, *P. niruri*: *Phyllanthus niruri*, *F. cataphracta*: *Flacourtia cataphracta*, *C. medica*: *Citrus medica*, *C. aphylla*: *Capparis aphylla*, *F. elephantum*: *Feronia elephantum*, *F. hispida*: *Ficus hispida*, *S. persica*: *Salvadora persica*, *L. vulgaris*: *Langenaria vulgaris*, *L. acutangula*: *Luffa acutangula*, *M. dioica*: *Momordica dioica*, *A. conyzoides*: *Ageratum conyzoides*, *C. myxa*: *Cordia myxa*, *C. zeylanica*: *Capparis zeylanica*, *C. capsularis*: *Corchorus capsularis*, *A. spinosus*: *Amaranthus spinosus*, *A. blitum*: *Amaranthus blitum*, *S. oleracea*: *Spinacia oleracea*, *P. quadrifida*: *Portulaca quadrifida*, *R. ornate*: *Rivea ornate*, *R. sativus*: *Raphanus sativus*, *C. pareira*: *Cissampelos pareira*, *C. occidentalis*: *Cassia occidentalis*, *C. tora*: *Cassia tora*, *P. bicalyculata*: *Peristrophe bicalyculata*, *C. asiatica*: *Centella asiatica*, *G. sylvestre*: *Gymnema sylvestre*, *M. pterygosperma*: *Moringa pterygosperma*, *A. lunulatum*: *Adiantum lunulatum*, *C. oblongifolius*: *Croton oblongifolius*, *R. serpentina*: *Rauwolfia serpentina*, *A. indica*: *Aristolochia indica*, *M. tenacissima*: *Marsdenia tenacissima*, *I. tinctoria*: *Indihoferia tinctoria*, *A. precatorius*: *Abrus precatorius*, *L. echinata*: *Luffa echinata*, *S. robusta*: *Shorea robusta*, *B. utilis*: *Betula utilis*, *D. alatus*: *Dipterocarpus alatus*, *B. roxburghii*: *Balanites roxburghii*, *A. procera*: *Albizia procera*, *M. koenigii*: *Murraya koenigii*, *A. indica*: *Azadirachta indica*, *T. undulata*: *Tecomella undulata*, *E. dracunculoides*: *Euphorbia dracunculoides*, *E. neriifolia*: *Euphorbia neriifolia*, *A. salvifolium*: *Alangium salvifolium*, *M. philippinensis*: *Mallotus philippinensis*, *A. cadamba*: *Anthocephalus cadamba*, *P. pinnata*: *Pongamia pinnata*, *A. lebbek*: *Albizia lebbek*, *C. buchanani*: *Cryptolepis buchanani*, *C. auriculata*: *Cassia auriculata*, *C. angustifolia*: *Cassia angustifolia*, *B. montanum*: *Baliospermum montanum*, *E. thomsoniana*: *Euphorbia thomsoniana*, *C. colocynthis*: *Citrullus colocynthis*, *P. lanceolata*: *Pluchea lanceolata*, *W. somnifera*: *Withania somnifera*, *B. cristata*: *Barleria cristata*, *J. communis*: *Juniperus communis*, *W. fruticosa*: *Woodfordia fruticosa*, *C. ternatea*: *Clitoria ternatea*, *A. arabica*: *Acacia arabica*, *H. spinosa*: *Hygrophila spinosa*, *E. fluctuans*: *Enhydra fluctuans*, *C. longa*: *Curcuma longa*, *A. heterophyllum*: *Aconitum heterophyllum*, *S. racemosa*: *Symplocos racemosa*, *S. potatorum*: *Strychnos potatorum*, *P. chaba*: *Piper chaba*, *S. album*: *Santalum album*, *V. wallichii*: *Valeriana wallichii*, *C. camphora*: *Cinnamomum camphora*, *A. moschatus*: *Abelmoschus moschatus*, *S. lappa*: *Saussurea lappa*, *P. cerasus*: *Prunus cerasus*, *M. fragrans*: *Myristica fragrans*, *S. aromaticum*: *Syzygium aromaticum*, *M. ferrea*: *Mesua ferrea*, *V. negundo*: *Vitex negundo*, *C. macrophylla*: *Callicarpa macrophylla*, *O. indicum*: *Oroxylum indicum*, *N. jatamansi*: *Nardostachys jatamansi*, *V. zizanioides*: *Vetiveria zizanioides*, *L. nepetifolia*: *Leonotis nepetifolia*, *D. zalil*: *Delphinium zalil*, *P. puddum*: *Prunus puddum*, *R. cordifolia*: *Rubia cordifolia*, *P. cablin*: *Pogostemon cablin*, *L. lacca*: *Laccifer lacca*, *H. mutabilis*: *Hibiscus mutabilis*, *N. nucifera*: *Nelumbo nucifera*, *J. sambac*: *Jasminum sambac*, *J. grandiflorum*: *Jasminum grandiflorum*, *A. paniculata*: *Andrographis paniculata*, *C. pluricaulis*: *Convolvulus pluricaulis*, *M. champaca*: *Michelia champaca*, *S. indica*: *Saraca indica*, *M. elengi*: *Mimusops elengi*, *O. fragrans*: *Osmanthus fragrans*, *J. pubescence*: *Jasminum pubescence*, *P. acerifolium*: *Pterospermum acerifolium*, *H. rosa-sinensis*: *Hibiscus rosa-sinensis*, *B. Orellana*: *Bixa orellana*, *C. procera*: *Calotropis procera*, *C. gigantea*: *Calotropis gigantea*, *C. thevetia*: *Cerbera thevetia*, *D. stramonium*: *Datura stramonium*, *O. sanctum*: *Ocimum sanctum*, *O. pallidus*: *Orthosiphon pallidus*, *O. basilicum*: *Ocimum basilicum*, *A. vulgaris*: *Artemisia vulgaris*, *O. majorana*: *Origanum majorana*, *L. macrophylla*: *Leea macrophylla*



Graph 1: Vishaghana Dravyas (alexeterics) of Aushadhi Varga (drug class)

Materials and methods

The book reviewed here has been edited and translated by Prof. Priyavrata Sharma and Dr. Guru Prasad Sharma, published by Chaukhamba Orientalia, Varanasi, it is the reprint edition of 2009.^[4] The writer has contributed to numerous *Aushadha Dravyas* (drug class) of herbal, animal, and mineral origin. Each *Shloka* has been screened and emphasis has been made on *Vishaghna Dravyas* (alexeterics) for the scope of research and therapeutic utility. Screened drugs have been depicted in the tables with their referred *Shlokas* (verse) and the page number mentioned according to the book reviewed here.

Results

Tables and graphs have been depicted based on the *Vargas* (chapters wise) as single drugs and few as a group

of herbs [Table 1 and Graph 1] consists of all the *Vishaghna Dravyas* mentioned in *Aushadha Varga* [Table 2 and Graph 2] shows *Vishaghna Dravyas* of *Dhatu Varga* [Table 3 and Graph 3] comprises *Vishaghna Dravyas* of *Dhanya Varga* [Table 4 and Graph 4], and comprises *Vishaghna Dravyas* of *Dhatu Varga*. Other than the single drugs, a few other groups of herbs as compound drugs having *Vishaghna* properties are mentioned in Table 5 and Graph 5.

Discussion

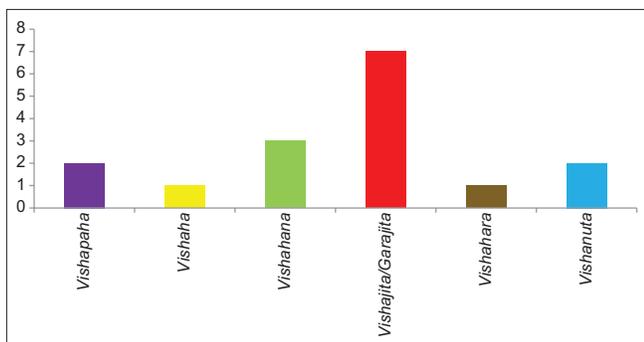
Eighty percentage of the world population depends on indigenous medicines for health care at primary levels, as per W. H. O., poison disrupts the health of an individual by disrupting the major domains. *Kaiydeva Nighantu* accounts for total of 514 medicinal varieties, out of which 178 drugs enlisted in the *Nighantu* possess *Vishaghna* (anti-poisonous) action, and at least 26% (46 drugs) are observed to possess *Vishapaha* property with the highest number, i.e., 32 in *Aushadhaadi Varga* (medicinal class), six in *Drava Dravyadi* (liquid substances) *I*, and four in each *Dhatvadi Varga* (mineral class) and *Mishrakaadi Varga* (combined substances), respectively. Eighteen drugs have been highlighted with specific indications for combating specific types of poisoning. The division of the *Vishaghna Dravyas* (alexeterics) based on different *Vargas* indicates that the antitoxic effect is not finite to *Aushadha Dravyas* (medicinal herbs), it rather includes the food elements and daily regimens. Out of all, 121 *Aushadha Dravyas* (medicinal herbs) act as antidots and repeal various poisons as a single drug and 5 as compound drugs. Among all the groups, the various food elements included are in the form of *Dhatu* (minerals), *Dhanya* as *Shuka* (cereals) and *Shimbi* (pulses), *Drava* (liquids) as *Jala* (water), *Dugdha* (milk), *Ghrta* (clarified milk butter), *Mutra* (urine), as both *Samanya* (common), and *Vishisht* (specific). *Ghrta* (clarified butter), *Ksheera* (milk) *Gandusha* (mouth rinse), and *Mukhalepa* (face pack) are among the daily regimens showing antitoxic and antidotal effects, in Ayurvedic texts, oil pulling (*Gandusha*) has been mentioned in the daily regimens which should be done on the regular bases as it helps the body to prevent the toxins and also detoxifies the bacteria or other toxins present in the body based on the holistic perspective.^[5,6] Moreover, milk and

Ghrta (clarified butter) both act as antidotes being demulcents they can be counted under mechanical antidotes.^[7] Water being an excellent source of removing toxins, though it may not neutralize toxins but acts like a lubricant for the organs to accelerate the rate of elimination.^[8]

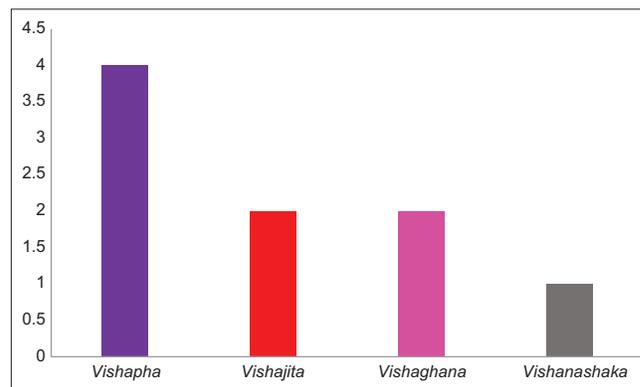
Various tribals use many of these medicinal herbs as antidote in snakebites and spider bites in Rajasthan, the leaf extracts

Table 2: *Vishahara Dravyas* (alexeterics) of *Dhatu Varga* (mineral class)

Drug name	Scientific name	Action	Reference
<i>Suvarna</i>	Aurum	<i>Vishajita</i>	Page number-274 Verse-5
<i>Loha</i>	Ferrum	<i>Garajita</i>	Page number-278 Verse-26
<i>Abhraka</i>	Mica	<i>Vishahana</i>	Page number-278 Verse-30
<i>Makshika</i>	Chalcopyrite	<i>Vishahana</i>	Page number-279 Verse-37
<i>Haritaal</i>	Arsenic trisulphide/ yellow arsenic	<i>Vishahara</i>	Page number-281 Verse-47
<i>Gairika</i>	Red ochere	<i>Vishapaha</i>	Page number-281 Verse-51
<i>Kashisha</i>	Green vitriol	<i>Vishapaha</i>	Page number-283 Verse-59
<i>Hingula</i>	Red sulphide/ cinnabar	<i>Vishmuta</i>	Page number-283 Verse-62
<i>Sindoora</i>	Red oxide of mercury	<i>Vishajita</i>	Page number-284 Verse-68
<i>Souviranjana</i>	Antimony sulphide	<i>Vishajita</i>	Page number-285 Verse-73
<i>Sourashtri Mritika</i>	Potash alum	<i>Vishaha</i>	Page number-286 Verse-79
<i>Kardama</i>	Unavailable	<i>Vishajita</i>	Page number-287 Verse-81
<i>Gorochana</i>	Bezoar	<i>Vishanuta</i>	Page number-288 Verse-87
<i>Shaileyama</i>	Parmelia perlata Ach.	<i>Vishahana</i>	Page number-288 Verse-89
<i>Samudraphena</i>	Cittle fish bone	<i>Vishajita</i>	Page number-296 Verse-130
<i>Khatika</i>	Chalk	<i>Vishajita</i>	Page number-299 Verse-145



Graph 2: *Vishahara Dravyas* (alexeterics) of *Dhatu Varga* (mineral class)



Graph 3: *Vishaghna Dravyas* (alexeterics) of *Dhanya Varga* (cereal class)

Table 3: *Vishaghna Dravyas* (Alexeterics) of *Dhanya Varga* (cereal class)

Dravyas	Scientific name	Action	Reference
<i>Rakta Shaali</i>	<i>O. sativa</i> Linn.	<i>Vishapha</i>	Page number-302 Verse-10
<i>Dirghashooka</i>	Unavailable	<i>Vishanashaka</i>	Page number-303 Verse-14
<i>Saramukha</i>	Unavailable	<i>Vishaghana</i>	Page number-303 Verse-10
<i>Shimbidhanya</i>	<i>Pulses</i>	<i>Vishajita</i>	Page number-309 Verse-49
<i>Nishpava</i>	<i>D. lablab</i> Linn.	<i>Vishapaha</i>	Page number-312 Verse-62
<i>Vallishimbi</i>	Unavailable	<i>Vishaghana</i>	Page number-312 Verse-64
<i>Tuvari</i>	<i>C. indicus</i> Spreng.	<i>Vishapaha</i>	Page number-315 Verse-75
<i>Kulathi</i>	<i>C. absus</i> Linn.	<i>Vishapha</i>	Page number-315 Verse-79
<i>Kodrava</i>	<i>P. scrobiculatum</i> L.	<i>Vishajita</i>	Page number-319 Verse-101

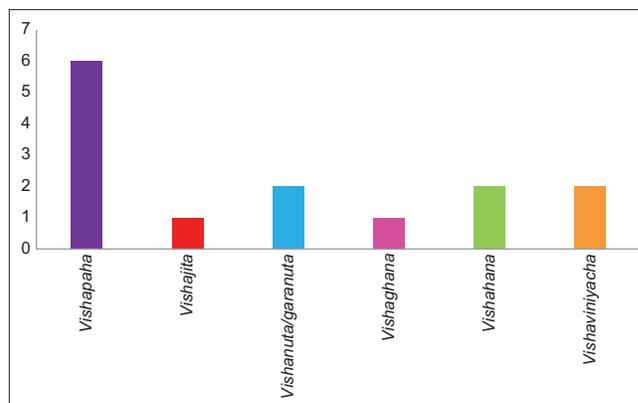
O. sativa: *Oryza sativa*, *D. lablab*: *Dolichos lablab*, *C. indicus*: *Cajanus indicus*, *C. absus*: *Cassia absus*, *P. scrobiculatum*: *Paspalum scrobiculatum*

Table 4: *Vishaghna Dravyas* (alexeterics) of *Drava Varga* (liquid class)

Drug	Scientific name	Action	References
<i>Samudra Jala</i>	Sea water	<i>Visharti Jita</i>	Page number-325 Verse-17
<i>Chandrakanta Manija Jala</i>	Blue moonstone water	<i>Vishapha</i>	Page number-329 Verse-44
<i>Go Dugdha</i>	Cow's milk	<i>Vishahar</i>	Page number-341 Verse-121
<i>Ushtra Dugdha</i>	Camel's milk	<i>Visha Viniyachati</i>	Page number-345 Verse-145
<i>Takra</i>	Butter milk	<i>Gara Viniyachati</i>	Page number-361 Verse-232
<i>Nari Ghrut</i>	Clarified butter from human milk	<i>Vishanuta</i>	Page number-369 Verse-274
<i>Hasini Ghrut</i>	Clarified butter from elephant milk	<i>Vishahana/Vishahanti</i>	Page number-369 Verse-275
<i>Karambha Ghrut</i>	Clarified butter from camel milk	<i>Vishapaha</i>	Page number-370 Verse-277
<i>Purana Ghrut</i>	Clarified butter from cow's milk	<i>Vishahanati</i>	Page number-371 Verse-285
<i>Kapitha Tail</i>	Oil extracted from <i>L. acidissima</i>	<i>Vishapaha</i>	Page number-370 Verse-337
<i>Madhvasava</i>	Infusion of <i>Dhatki</i> flowers and honey	<i>Vishapaha</i>	Page number-390 Verse-390
<i>Chaaga Mutra</i>	Goat urine	<i>Vishapaha</i>	Page number-399 Verse-438
<i>Hashti Mutra</i>	Elephant urine	<i>Vishapaha</i>	Page number-399 Verse-444
<i>Rasabha Mutra</i>	Jennet urine	<i>Garanuta</i>	Page number-400 Verse-447
<i>Naramutra</i>	Human urine	<i>Vishaghana</i>	Page number-400 Verse-448

L. acidissima: *Limonia acidissima*

of *Gunja* (*Abrus precatorius* L.) are taken orally in snakebites due to their anti-inflammatory and anti-allergic activity. Root



Graph 4: *Vishaghna Dravyas* (alexeterics) of *Drava Varga* (liquid class)

paste of *Calotropis gigantea* is applied locally in snakebite as antivenom due to antipyretic, analgesic, sedative, and anticonvulsant activity of the drug.^[9] The *Arka* (*Calotropis procera* R. Br.).

plant latex is applied in snakebites for early cure as it is anti-inflammatory, analgesic, and antipyretic. The plant *Aprajita* (*Clitoria ternatea* Linn.) root extract is taken orally by the tribals as antidote in snakebite. Latex of *Snuhi* (*Euphorbia nerifolia* Linn.) is applied locally on the wound as antivenom in snakebite. *Koshatakai* (*Luffa acutangula* Roxb) whole plant or crushed fruits are taken orally with water as antivenom in snakebite.^[9] Tribals of Assam use the paste of leaves of *Murva* (*Marsdenia tinctoria* W. and A.) applied twice daily for 3 days on wounds in dog bites.^[10] Paste of *Oryza sativa* grains rubbed on the body in caterpillar allergy.^[10] Potassium gymnemate extracted from *Meshashringi* (*Gymnema sylvestri* R. Br) is used in neutralizing agent for snakebites.^[11]

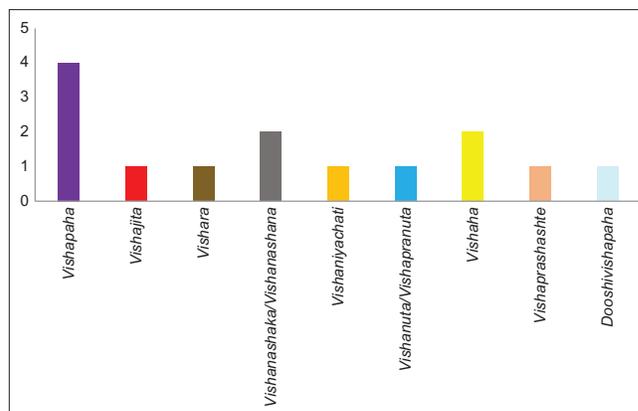
Drugs acting specifically have been notified where two drugs: *Nakuli* (*Rauwolfia serpentina* Benth. ex kurz) and *Nagadamani* (*Aristolochia indica* Linn.) have been specifically mentioned as effective against snake venom and one drug has been specified for *Dooshivishapaha*. Altogether, eighteen drugs have been highlighted with specific indications in combating particular types of envenomation or poisoning refer to Table 6. The drug (*Nakuli*) *Rauwolfia serpentina* has been indicated for snake, spider, scorpion, and rat bites. Research studies have been done on the roots of *Rauwolfia serpentina* showing anti-venomous activity against the *Naja naja* snake venom.^[12] Another drug *Nagdamini* (*Aristolochia indica* Linn.) has been mentioned for both snake as well as spider poison. *Aristolochia indica* shows anti-venomous activity against various snake species, *Echis carinatus*, cobra, viper, *Vipera russelli*, and *Daboia russelii* venom.^[13] The root extracts of *Vitex negundo* significantly antagonized the *Vipera russelii* and *Naja kaouthia* venom-induced lethal activity both in *in-vitro* and *in-vivo* studies.^[14] *Devadaali* (*Luffa echinate* Roxb.), *Nakuli* (*Rauwolfia serpentina* Benth. ex kurz), *Vishamushti* (*Ageratum conyzoides* Linn.), and *Ankota* (*Alangium salviifolium* Linn. f. Wang.), all four drugs are indicated in rat poison. Drugs such as *Haritaki* (*Terminalia chebula* Retz.), *Kareera* (*Capparis*

Table 5: Compound *Dravyas* (substances) of different *Vargas* (classes) having *Vishagna* (anti-poisonous) properties

<i>Dravya</i>	<i>Varga</i>	Action	Reference
<i>Jeevniyagana</i>	<i>Aushadha Varga</i>	<i>Vishahara</i>	Page number-23 Verse-111
<i>Samanya Gunas of Madhu</i>	<i>Aushadha Varga</i>	<i>Vishajita</i>	Page number-37 Verse-178
<i>Bhramara Madhu</i>	<i>Aushadha Varga</i>	<i>Vishanashaka</i>	Page number-39 Verse-189
<i>Odalaka Madhu</i>	<i>Aushadha Varga</i>	<i>Vishapaha</i>	Page number-40 Verse-196
<i>Pakava and Ama Madhu Guna</i>	<i>Aushadha Varga</i>	<i>Vishapaha</i>	Page number-43 Verse-216
<i>Samanya Gunas of Ratnas</i>	<i>Dhatu Varga</i>	<i>Vishapaha</i>	Page number-298 Verse-142
<i>Samanya Gunas of Jala</i>	<i>Drava Varga</i>	<i>Vishaniyachati</i>	Page number-323 Verse-4
<i>Samnya Gunas of Ghrut</i>	<i>Drava Varga</i>	<i>Vishapaha</i>	Page number-368 Verse-267
<i>Saralaadi Tail Gunas</i>	<i>Drava Varga</i>	<i>Vishnuta/Vishapranuta</i>	Page number-381 Verse-341
<i>Samanya Mutra Guna</i>	<i>Drava Varga</i>	<i>Vishaha</i>	Page number-397 Verse-427
<i>Suranaadi Vataka</i>	<i>Kritaana Varga</i>	<i>Vishanashana</i>	Page number-429 Verse-183
<i>Shastika Anna</i>	<i>Kritana Varga</i>	<i>Vishaghna</i>	
<i>Gonasadi Sarpa Masa</i>	<i>Mansa Varga</i>	<i>Dooshi Vishapha</i>	Page number-421 Verse-191
<i>Mukhalepa</i>	<i>Vihara Varga</i>	<i>Vishaha</i>	Page number-463 Verse-55
<i>Ghruta Ksheera Gandusha</i>	<i>Vihra Varga</i>	<i>Vishaprashashte</i>	Page number-495 Verse-67

Table 6: Drugs mentioned for combating specific type of poisoning

Drug	Indication	Interpretation
<i>Nakuli</i>	<i>Sarpa, Luta, Vrishchika, Aakhu Visha</i>	Snake poison, spider poison, scorpion poison, rat poison
<i>Nagdanni</i>	<i>Sarpa Luta Visha</i>	Snake poison, spider poison
<i>Vishamushti</i>	<i>Mooshika Vishama</i>	Rat poison
<i>Devadaali</i>	<i>Akhu Vishaha</i>	Rat poison
<i>Ankota</i>	<i>Akhu Vishaha</i>	Rat poison
<i>Gonasadi Sarpa Mamsa</i>	<i>Dooshivishapha</i>	Cumulative poison
<i>Haritaki</i>	<i>Garaha</i>	Artificial poison
<i>Kareera</i>	<i>Garaha</i>	Artificial poison
<i>Pracheenamalakam</i>	<i>Garapha</i>	Artificial poison
<i>Peelu</i>	<i>Garaha</i>	Artificial poison
<i>Neep</i>	<i>Garaha</i>	Artificial poison
<i>Koshatakai</i>	<i>Garaha</i>	Artificial poison
<i>Kalshaka</i>	<i>Garaha</i>	Artificial poison
<i>Danti</i>	<i>Garapha</i>	Artificial poison
<i>Chavya</i>	<i>Garapha</i>	Artificial poison
<i>Loha</i>	<i>Garajit</i>	Artificial poison
<i>Takra</i>	<i>Gara Viniyachati</i>	Artificial poison
<i>Rashabha mutra</i>	<i>Garanuta</i>	Artificial poison



Graph 5: Compound *Dravyas* (substances) of different *Vargas* (classes) having *Vishagna* (anti-poisonous) properties

aphylla Roth.), *Pracheenamla* (*Flacourtia cataphracta* Roxb.), *Peelu* (*Salvadora persica* Linn.), *Neep* (*Anthocephalus cadamba* Mig.), *Koshatakai* (*Luffa acutangula* Roxb.), *Kalsaka* (*Corchorus capsularis* Linn.), *Danti* (*Baliospermum montanum* Muell-Arg.), and *Chavya* (*Piper chaba* Hunter) along with other *Dravyas* such as *Loha* (ferrum), *Takra* (buttermilk), and *Rashabha Mutra* (jennet urine) are all indicated in *Garavisha* (artificial poison). In general, *Vishaghna* words are said as antidotes and various terms related to antidotes are used interchangeably, but they are particularly defined as *Vishaghna*-neutralization of poisons,^[15] *Vishajeeta*-conquering or destroying poison,^[16] *Vishapha*-poison repelling,^[17] *Vishahana*, *Vishanashaka*-destroying poison,^[18] *Vishdooshini*-poison corrupting, polluting, and violating,^[19] *Vishaha*-removing poison^[20] *Vishahara*-removing venom, goddess of venom or antidote action,^[21] *Vishanuda/Vishanuta*-repealing poison,^[22] *Dushivisha*-weak poison,^[14] and *Garavisha*-combination of two or more poisonous or nonpoisonous drugs.^[14] Many drugs have been justified as anti-poisonous based on their synonyms mentioned in *Kaiyadeva Nighantu*, such as *Kapitha* (*Feronia elephantum* Correa) as *Garahruta*, *Vandhyakarkotaki* (*Momordia dioica* Roxb.) as *Vishaprashamani*, *Nakuli* (*Rauwolfia serpentina* Benth. ex kurz) as *Vishadanshtrika*, *Devadaali* (*Luffa echinate* Roxb.) as *Aakhuvishapha*, *Happusha* (*Juniperus communis* Linn.) as *Vishadushini*, *Girikarnika* (*Clitoria ternatea* Linn.) as *Vishaghani*, and *Samukha* (*Ocimum basilicum pilosum*) as *Garaghana*, this shows that these drugs emphasize on the management of poison.

Conclusion

The review here implies the collection of all the *Vishaghna Dravyas* (alexeterics) of *Kaiyadeva Nighantu*, which incorporates of medicinal herbs, food elements, metals, daily regimens, and various single and compound herbs for combating specific poisons. Various new drugs such as *Nakuli* (*Rauwolfia serpentina*), *Sumukha* (*Ocimum basilicum*), *Happusha* (*Juniperus communis*), *Nagdanni* (*Aristolochia indica*), *Sahachara* (*Barleria cristata*), *Kinihi* (*Albizia procera*), *Neep* (*Anthocephalus cadamba*), *Pracheenamla* (*Flacourtia*

cataphracta), and *Buka (Osmanthus fragrans)* have been referred as *Vishagha Dravyas* (alexeterics) which needs to be evaluated and revalidated by new researches for the therapeutic purpose. Use of different terms for *Vishaghna* (anti-poisonous) at different places can be analyzed for the classification method of *Vishaghna* (anti-poisonous) based on Ayurvedic literature.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Kumar B, Vijayakumar M, Govindarajan R, Pushpangadan P. Ethnopharmacological approaches to wound healing – Exploring medicinal plants of India. *J Ethnopharmacol* 2007;114:103-13.
2. Biodiversity in India: A Complete Summary. Available from: <https://www.jagranjosh.com/general-knowledge/summary-on-the-biodiversity-in-qw3sfindia-1521716572-1>. [Last accessed 2022 Mar 09].
3. Bharati SK, Dixit A, Ram B, Singh AK. Review of Haridra W.S.R. To its synonyms and the therapeutic uses from Kosha and Nighantu literature. *Int Ayurvedic Med J* 2017;5:194-201.
4. Sharma PV. *Kaiyadeva Nighantu*. 9th ed. Varanasi: Chaukhambha Orientalia; 2009.
5. Asokan S, Rathan J, Muthu MS, Rathna PV, Emmadi P, Raghuraman, et al. Effect of oil pulling on *Streptococcus mutans* count in plaque and saliva using Dentocult SM Strip mutans test: A randomized, controlled, triple-blind study. *J Indian Soc Pedod Prev Dent* 2008;26:12-7.
6. Asokan S, Kumar RS, Emmadi P, Raghuraman R, Sivakumar N. Effect of oil pulling on halitosis and microorganisms causing halitosis: A randomized controlled pilot trial. *J Indian Soc Pedod Prev Dent* 2011;29:90-4.
7. Goswami DK, Sharma RK. Ghee as an antidote: A literary review. *Int Ayurvedic Med J* 2016;7:1317-23.
8. Alakh Yoga Organisation. India: The Yoga Organisation. Available from: <https://alakhyaoga.com/drinking-water-body-detoxification/>. [Last accessed on 2022 Nov 16].
9. Jain A, Katewa SS, Sharma SK, Galav P. Snakebite and indigenous snakebite remedies practiced by some tribals of Rajasthan. *Indian J Tradit Knowl* 2011;10:258-68.
10. Teron R, Borthakur SK. Folklore claims of some medicinal plants as antidote against poisons among the karbis of Assam, India. *Pleione* 2013;07:346-56.
11. Kini RM, Gowda TV. Studies on snake venom enzymes: Part I. Purification of ATPase, a toxic component of Naja Naja venom & its inhibition by potassium gymnemate. *Indian J Biochem Biophys* 1982;19:152-4.
12. Sivaraman T, Sreedevi NS, Meenachisundharam S, Vadivelan R. Neutralizing potential of *Rauvolfia serpentina* root extract against Naja Naja venom. *Braz J Pharm Sci* 2020;56:e18050.
13. Meenatchisundaram S, Parmeshwari G, Michale A. Studies on antivenom activity of *Andrographis paniculata* and *Aristolochia indica* plant extracts against *Daboia russelli* venom by *in vivo* and *in vitro* methods. *Indian J Sci Technol* 2009;2:76-9.
14. Alam MI, Gomes A. Snake venom neutralization by Indian medicinal plants (*Vitex negundo* and *Emblia officinalis*) root extracts. *J Ethnopharmacol* 2003;86:75-80.
15. NAMASTE-Portal; 2017. Available from: <http://namstp.ayush.gov.in/#/sat-t>. [Last accessed on 2023 Jan 27].
16. Sanskrit–Dictionary. (n.d.). Sanskrit–Dictionary. viSajit. Available from: <https://www.learnsanskrit.cc/translate? Search = viSajit&dir = se>. [Last accessed on 2023 Mar 06].
17. Sanskrit – Dictionary. (n.d.). Sanskrit – Dictionary. viApaha. Available from: <https://www.learnsanskrit.cc/translate? Search = viApaha&dir = se>. [Last accessed on 2023 Mar 06].
18. Sanskrit – Dictionary. (n.d.). Sanskrit – Dictionary. viSanAshana. Available from: <https://www.learnsanskrit.cc/translate?Search=विषनाशन&dir = au>. [Last accessed on 2023 Mar 06].
19. Sanskrit – Dictionary. (n.d.). Sanskrit – Dictionary. viSadUSaNa. Available from: <https://www.learnsanskrit.cc/translate? Search=विषदूषिणी&dir = au>. [Last accessed on 2023 Mar 06].
20. Sanskrit–Dictionary. (n.d.). Sanskrit–Dictionary. viSaha. Available from: <https://www.learnsanskrit.cc/translate? Search = viSaha&dir = se>. [Last accessed on 2023 Mar 06].
21. Sanskrit–Dictionary. (n.d.). Sanskrit–Dictionary. viSahara. Available from: <https://www.learnsanskrit.cc/translate? Search = viSahara&dir = se>. [Last accessed on 2023 Mar 06].
22. Sanskrit–Dictionary. (n.d.). Sanskrit–Dictionary. viSanud. Available from: <https://www.learnsanskrit.cc/translate? Search = viSanud&dir = se>. [Last accessed on 2023 Mar 07].