

Classification of the venomous serpents found in Sri Lanka on the basis of the principles of Agada Tantra

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Agada Tantra is one of the main branches of Ayurveda. Agada Tantra comprehensively elaborates the clinical application for snake bites. Four types venomous serpents are described in Ayurveda: Darweekara, Mandalika, Rajeela and Vaikaranja. The treatment procedure varies according to the patients' type. Despite the specific descriptions of characteristics of the snakes in Ayurveda texts, such a wide classification would not be relevant to the serpents found in Sri Lanka. Therefore, in treatment of snake bites, Sri Lankan physician encounters a problem of diagnosis due to his inability to identify the particular kind of serpent.

Zoological evidence shows that there exists at least 94 species in Sri Lanka, 35 of which are venomous while twenty species have been identified as fatal. Thirteen species are in sea, which are called sea snakes or "Walakkadi". The other species live in land. In addition, 3 species with Mada Visha, 12 species with Sulu Visha serpents are also found; 59 land serpents are non venomous. A detailed account of the land serpents found in Sri Lanka was prepared. The details were prepared on the basis of the characteristics mentioned in chapter 23 of Chikitsa stana, Charak Samhita and in chapter 04 of Kalpasana, Susruta Samhita. After the preparation of this detailed account, the land-venomous serpents in The National Zoological Garden Dehiwala were closely examined and their characteristics were used as a basis to identify serpents in the prepared sheet. We also collected vital details of snake bites (clinical features during the snake bite) and other general features from Dr. Nihal Senerath De Silva, the Education officer the National Zoological Garden in Dehiwala. The details were analyzed in order to prepare specific criteria for classification of land venomous serpents found in Sri Lanka. [Ugravisha (07) + Mada Visha (03) + Sulu Visha (12)].

The results of the study reveal that the four species of venomous serpents including Elapidae family shows features of Darweekara group in Ayurvedic classification, Eg :- Cobra, *Naga raja*, Depath Kaluwa - *Caliophis melanurus sinhaleus*, Tel Karawala - *Bungarus caeruleus*, Mudu Karwala - *Bungarus ceylonicus celanicus*. It was also confirmed that the serpents belonging to viperid family show the features of Mandalika in Ayurvedic classification. E.g. :- Titpolaga - *Daboia ruselli pulchella*, Kunakatuwa - (Polontelissa) - *Hypnale hypnale*. However, there were 12 venomous serpents belonging to Colubridae family. Of them, 10 species showed the features of Rajeela group, while two others share features of Vaikaranja group. The study has considerable significance in diagnosis of venomous snake bites.

Key words: Venomous serpents, Darweekara, Mandalika, Rajeela, Vaikaranja, Serpents

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