The story of venom in South Asia must begin with one word: diversity. With a population of over 1.6 billion people, coupled with a 3500-year literary history, South Asia defies simple classification. India and her neighbours are home to some of the world’s deadliest snakes and arachnids—cobras, kraits, vipers, the Indian red scorpion, and numerous venomous spiders—and conservative estimates count at least 14,000 annual snakebite deaths in the region. Such statistics, shocking as they may be, obscure the many more victims who survive permanently disabled by severe organ and tissue damage, or amputated limbs. Not surprisingly, people of the region have long sought ways to counter envenomation.

Healing snakebite has been a common theme throughout the region’s written history. Arrian’s *Indica* (fourth century BC) describes how Alexander the Great was impressed by the abilities of Indian doctors to cure his troops’ snakebites where his own Greek physicians had failed. The classics of Ayurvedic medicine are the earliest surviving written texts to systemise treatment of venom; they classify it as one of the eight branches of medicine. The earliest Vedic hymns invoked deities to cure envenomation, and while classical Ayurveda acknowledged the efficacy of such religious methods by the first century AD, it tended to present them as the domain of Brahman priests. Ayurvedic doctors instead emphasised treating envenomation with traditional antivenoms prepared with plant, animal and mineral ingredients.

Despite the suppositions of modern public health literature, Indians have long been aware that many snakebites do not result in envenomation—the so-called ‘dry bite’ (nirviṣadaṃśa). They even recognised a condition where symptoms of envenomation occurred in people who had an extreme phobia of snakes (śaṅkāviṣa, literally ‘fear-poison’). The prescribed cure was reassurance. Ayurveda had an intricate typology of snakes, bites and symptom-based stages of envenomation varying by type of snake, which they correlated with the spread of venom through seven ‘tissues’ of the body. Starting with the skin, considered the easiest to heal, the venom spreads ‘like oil on water’ throughout the body and finally settles in the bone marrow where it is thought to be beyond treatment.

Ayurveda has been the mainstream of learned medicine for 2000 years, but in the latter half of the first millennium, a new system arose that rapidly grew in popularity. The Garudam tradition originated as numerous divinely-revealed medical manuals for treating snakebite and a host of related medical issues. It incorporated some of the typologies...
and vocabulary of early Ayurveda, but improvised an elaborate system of religious healing focused on the bird-deity Garuda. While Garuda is today ubiquitously associated with the Hindu god Vishnu, these texts considered him to be an alternative manifestation of Shiva. Shiva’s connection with poison and healing goes back to the early hymns of the Rig Veda, and becomes famous in the epic Mahabharata where the story is told of how he became Nilakantha (“blue-throat”) by drinking a terrible poison that threatened to destroy the universe. Pairing Shiva with the avian anehnecy of snakes and incorporating their medical teachings into the then-popular tantric ritual framework created a system that quickly became the de facto standard for snakebite treatment in South Asia.

The Garuda Tantras teach both mantra-based “religious” cures for snakebite as well as plant-based treatments. Faith in the utility of mantras to treat snakebite envenomation was widespread, even among highly-educated scholars of the day. Mantras were considered to be more effective than plant-based antivenoms, but also more dangerous in that if the practitioner made a mistake in the ritual, disastrous effects would ensue. The basic ritual consisted of a complex routine of visualisation and sacralisation of the body of the practitioner. The result would be a spiritual transformation of the practitioner into the deity in question—usually Garuda, but also Shiva as Nilakantha or a host of different goddesses. The most popular mantra was a group of five syllables sacred to Garuda, variously arranged to form different words and effect different actions on the venom.

The herbal antidotes of the Garuda Tantras ranged in complexity from a single herb to complex formulas made from dozens of herbal, animal, and mineral ingredients. Correlating the Sanskrit names of these herbs with Latin equivalents is a desideratum, but the task is difficult because many plants have various names, some may no longer be in use, and some names may refer to more than one plant, depending on the region.

With its popularity, the Shiva-focused texts could not contain the Garudam tradition for long. We see influence of the Garuda Tantras on mainstream Ayurveda starting in the seventh century. We soon also see Jain Tantras, Vrusha-focused Tantras, and Buddhist Tantras all developing their own systems of snakebite medicine on the model of the Garuda Tantras. Whereas the two former groups appear to have copied directly, making only minor changes, the treatment of snakebite in Buddhism was more complex and goes back to the story of how the Buddha was said to have taught his disciples a particular spell for curing snakebite after one of them was bitten while meditating in a cave.

The future of venom in South Asia is difficult to predict. The top-down approach of the modern snakebite prevention program has not appeared to be working particularly well. It is suggested more dialogue with traditional healers who do not charge a fee for life-threatening conditions like snakebite. The current system of snakebite treatment in South Asia is often subsidised, though quality varies and many rural people prefer to rely on their own traditional healers who do not charge a fee for life-threatening conditions like snakebite.

Modern snake antivenom is now widely distributed in South Asia. It is often used, though quality varies and many rural people prefer to rely on their own traditional healers who do not charge a fee for life-threatening conditions like snakebite.

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