

EXPLORING SNAKE BODY PARTS IN TRADITIONAL FOLK MEDICINE: A STUDY IN ZOO THERAPEUTICS

CHANDRA MUKHERJEE

DEPARTMENT OF ZOOLOGY, MAULANA AZAD COLLEGE, KOLKATA, INDIA

ABSTRACT

This study delves into the traditional folk medicine practices involving snake body parts, shedding light on the ancient healing traditions known as zoo therapeutics. Snakes, revered and feared in many cultures, have been historically utilized for their therapeutic potential. From snake venom and skins to scales and bones, these body parts have found applications in traditional healing systems across the world. This research explores the historical, cultural, and medicinal aspects of snake-based treatments, their significance, and the associated ecological considerations. By examining the role of snake body parts in folk medicine, this study offers insights into traditional healing practices, their cultural significance, and the potential conservation implications for snake populations.

KEYWORDS

Zoo therapeutics; Traditional medicine; Folk medicine; Snake body parts; Snake venom; Snake skins; Traditional healing

INTRODUCTION

Throughout human history, snakes have held a unique place in our collective consciousness—feared as deadly predators yet revered for their mystique and symbolic significance. Beyond their roles in mythology and ecology, snakes have played a curious and sometimes controversial role in traditional folk medicine. This study embarks on a journey into the intriguing world of "zoo therapeutics," an ancient healing tradition that involves the use of animal-derived substances in traditional medicine systems.

In the vast tapestry of traditional medicine, which encompasses an array of cultural practices and healing systems, zoo therapeutics stands out as a unique and complex phenomenon. It explores the healing

potential of various animal parts, including bones, skins, organs, and secretions. Among these animals, snakes have been prominent players in traditional and folk healing practices across the globe.

While snake-based remedies may elicit a mix of fascination and skepticism in modern times, their historical and cultural significance cannot be denied. From snake venom used as an antidote to snakebite envenomation, to the medicinal properties attributed to snake skins and scales, the utilization of snake body parts spans centuries and civilizations.

This research seeks to explore the multifaceted realm of snake body parts in traditional folk medicine, unraveling the historical, cultural, and medicinal dimensions of these practices. It aims to shed light on the rich tapestry of traditional healing knowledge, the deep cultural significance of snake-based remedies, and the potential ecological implications of such practices.

The Significance of Studying Zoo Therapeutics:

The study of zoo therapeutics extends beyond a mere examination of medicinal practices. It represents an intersection of cultural heritage, traditional knowledge, and ecological impact. By delving into the uses of snake body parts in folk medicine, we gain insights into the intricate relationship between humans and the natural world. This research not only provides a window into traditional healing practices but also raises critical questions about the conservation of snake populations in a world where human activities increasingly threaten their existence.

As we embark on this exploration of snake body parts in traditional folk medicine, we venture into a realm where history, culture, and nature converge. By understanding the significance of zoo therapeutics and its role in traditional healing systems, we contribute to the preservation of cultural diversity and ecological balance in our rapidly changing world.

METHOD

The process of exploring snake body parts in traditional folk medicine, as part of a study in zoo therapeutics, is a multi-faceted endeavor that encompasses extensive research, cultural engagement, and ecological evaluation. This process begins with an in-depth literature review, where a wide range of sources are consulted to gather historical and cultural knowledge of snake-based remedies. These sources include academic databases, ethnobotanical records, historical texts, and cultural documents. This foundational step allows researchers to grasp the historical and cultural contexts surrounding the use of snake body parts in traditional medicine across different regions.

Field surveys and interviews form the heart of the research process. These involve direct engagement with local communities, traditional healers, and indigenous practitioners in regions where snake-based remedies are prevalent. Ethnographic fieldwork, conducted with the utmost respect for cultural sensitivities, includes semi-structured interviews and participant observations. These interactions provide invaluable insights into the types of snake body parts used, the methods of preparation, the therapeutic applications, and the profound cultural significance associated with these practices.

The documentation of traditional knowledge is a crucial component of the research process. It involves recording the vernacular names of snakes, descriptions of healing rituals, and the traditional beliefs underpinning the effectiveness of snake-based remedies. Additionally, efforts are made to identify any sustainability practices or taboos linked to the use of snake body parts, highlighting the importance of preserving these cultural nuances.

Ethnopharmacological analysis follows, aiming to understand the medicinal properties attributed to snake body parts. This phase categorizes the therapeutic uses of these parts, explores their preparation methods, and examines reported health benefits. Collaboration with traditional healers and local experts helps compile an inventory of snake-based remedies, including insights into their potential pharmacological properties and active compounds.

Recognizing the ecological implications of using snake body parts in traditional folk medicine, the research incorporates an ecological impact assessment. This assessment evaluates the ecological status of the snake species involved and assesses potential risks to their populations. The findings inform the formulation of conservation strategies and recommendations that promote the sustainable use of snake body parts or alternative practices that safeguard snake biodiversity.

Throughout the entire research process, ethical considerations remain paramount. Informed consent is diligently obtained from all participants, and research protocols adhere to ethical guidelines that respect cultural traditions, animal welfare, and indigenous knowledge. By following this comprehensive process, the study endeavors to provide a nuanced understanding of the intricate relationship between humans, snakes, and traditional healing practices, contributing to the preservation of cultural heritage while promoting ethical and sustainable approaches to zoo therapeutics involving snakes.

RESULTS

Historical and Cultural Significance: The research revealed the deep-rooted historical and cultural significance of snake body parts in traditional folk medicine. Across diverse regions and cultures, snakes have been regarded as both potent healers and formidable sources of fear and fascination. Various parts of

snakes, including venom, skin, bones, and scales, have been employed in traditional healing rituals for centuries. These practices have been integral to cultural identity, folklore, and indigenous knowledge.

Therapeutic Applications: The study documented a wide range of therapeutic applications associated with snake body parts. Snake venom has been used to treat ailments such as rheumatism and neurological disorders. Snake skins and scales have been applied for skin conditions, while snake bones have been utilized to promote bone health and healing. The traditional healers and practitioners shared their insights into the methods of preparation and administration of these remedies.

Cultural Significance: Snake-based remedies often extend beyond their medicinal properties and hold cultural significance in various societies. Snakes are associated with rituals, symbolism, and spiritual beliefs. The use of snake body parts is intertwined with cultural practices, mythologies, and the preservation of traditional knowledge.

Ecological Impact: The research underscored the potential ecological impact of the use of snake body parts in traditional folk medicine. The unsustainable harvesting of snakes for medicinal purposes can threaten snake populations, some of which are already at risk due to habitat loss and persecution. Conservation strategies are necessary to balance cultural practices with the preservation of snake biodiversity.

DISCUSSION

Conservation and Sustainability: The discussion emphasizes the need for conservation efforts and sustainability measures to address the potential ecological consequences of using snake body parts in traditional medicine. Collaborative initiatives involving local communities, conservation organizations, and traditional healers can help strike a balance between cultural heritage and wildlife preservation. Encouraging the sustainable use of alternative materials or the cultivation of medicinal plants can mitigate the pressure on snake populations.

Ethical Considerations: The ethical dimension of using animals in traditional healing practices is a complex issue. While cultural traditions and indigenous knowledge must be respected, ethical guidelines should be established to ensure the humane treatment of animals and the conservation of endangered species. Engaging with traditional healers and practitioners in dialogue about ethical and sustainable practices is crucial.

Public Awareness and Education: The findings emphasize the importance of public awareness and education regarding the cultural significance and potential ecological impact of snake-based remedies. Community-

based initiatives can promote responsible use and conservation awareness while respecting cultural diversity.

CONCLUSION

The exploration of snake body parts in traditional folk medicine, as a study in zoo therapeutics, underscores the rich tapestry of human-animal relationships, cultural heritage, and ecological considerations. Snakes, regarded with reverence and awe, have played pivotal roles in traditional healing practices across cultures. These practices offer unique insights into the intricate connections between humans and the natural world.

However, the study also highlights the potential ecological implications of these practices, particularly regarding the conservation of snake species. Balancing cultural preservation with wildlife conservation presents a complex challenge that requires collaboration, ethical considerations, and sustainable approaches. The research underscores the importance of dialogue, awareness, and education to navigate this intricate terrain.

Ultimately, the study contributes to a deeper understanding of zoo therapeutics, the preservation of cultural diversity, and the need for responsible and sustainable practices that honor both traditional knowledge and ecological stewardship in the context of snake body parts in traditional folk medicine.

REFERENCES

1. Alves, R.R., Alves, H.N., 2011. The faunal drugstore: animal-based remedies used in traditional medicines in Latin America. *J. Ethnobiol. Ethnomed.* 7, doi: 10.1186/1746- 4269-7-9.
2. Alves, R.R., Pereira Filho, G.A., Lima, Y.C., 2007. Snakes used in ethno medicine in north east Brazil environment. *Development and Sustainability.* 9, 455-464.
3. Basavarajappa, B.S., Gowda, T.V., 1992. Comparative characterization of two toxic phospholipases A₂ from Indian cobra (*Naja naja naja*) venom. *Toxicon.* 30, 1227-1238.
4. Bhatt, B.D., Zuckerman, M.J., Foland, J.A., Guerra, L.G., Polly, S.M., 1988. Rattlesnake meat ingestion—a common Hispanic folk remedy. *West. J. Med.* 149, 605.
5. Chakravorty, J., Meyer-Rochow, V.B., Ghosh, S.J., 2011. Vertebrates used for medicinal purposes by members of the Nyishi and Galo tribes in Arunachal Pradesh (North-East India). *J. Ethnobiol. Ethnomed.* 7, doi: 10.1186/1746- 4269-7-13.

6. Cura, J.E., Blanzaco, D.P., Brisson, C., Cura, M.A., Cabrol, R., Larrateguy, L., Mendez, C., Sechi, J.C., Silveira, J.S., Theiller, E., de Roodt, A.R., Vidal, J.C., 2002. Phase I and pharmacokinetics study of crotoxin (cytotoxic PLA (2), NSC- 624244) in patients with advanced cancer. *Clin. Cancer. Res.* 8, 1033–1041.
7. Damaj, M.I., Meyer, E.M., Martin, B.R., 2000. The antinociceptive effects of $\alpha 7$ nicotinic agonists in an acute pain model. *Neuropharmacol.* 39, 2785–2791.
8. Datubo–Brown, D.D., Blight, A., 1990. Inhibition of human fibroblast growth in vitro by a snake oil. *Br. J. Plast. Surg.* 43, 183–186.
9. Decker, M.W., Meyer, M.D., Sullivan, J.P., 2001. The therapeutic potential of nicotinic acetylcholine receptor agonists for pain control. *Expert. Opin. Investig. Drugs.* 10, 1819–1830.
10. Donnini, S., Finetti, F., Francese, S., Boscaro, F., Dani, F.R., Maset, F., Frasson, R., Palmieri, M., Pazzagli, M., De Filippis, V., Garaci, E., Ziche, M., 2011. A novel protein from the serum of *Python sebae*, structurally homologous with type- γ phospholipase A(2) inhibitor, displays antitumour activity. *Biochem. J.* 440, 251–262.