

## Exploring New Horizons in Agadtantra ( Ayurvedic Clinical Toxicology )

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[https://www.doi.org/10.63778/PDEASIJRAAS-ARJCPL/2025\\_31251](https://www.doi.org/10.63778/PDEASIJRAAS-ARJCPL/2025_31251)**Abstract:**

*Agadtantra*, a vital branch of Ayurveda dealing with toxicology, encompasses the diagnosis, prevention, and management of poisoning from natural and artificial sources. While traditionally focused on snake bites, insect stings, and plant-based toxins, the scope of *Agadtantra* is rapidly expanding in response to modern-day toxicological challenges such as chemical exposure, drug toxicity, environmental pollutants, and bioterrorism. This paper explores emerging frontiers in *Agadtantra*, integrating classical principles with contemporary scientific advancements. Emphasis is placed on revisiting ancient formulations, developing evidence-based antidotes, and leveraging interdisciplinary approaches to enhance diagnostic and therapeutic outcomes. By bridging traditional wisdom with modern toxicology, this study aims to reestablish *Agadtantra* as a dynamic and relevant discipline in the 21st century, offering holistic solutions to both conventional and novel toxicological threats.

**Keywords:** Ayurvedic Toxicology, Antidotes, forensic medicine, CME, Occupational and Industrial toxicity.

**Introduction**

Agadtantra ( Ayurvedic clinical Toxicology), one of the eight foundational branches of Ayurveda, deals with toxicology and forensic medicine. Traditionally encompassing concepts such as visha (toxins), their classifications, and antidotal treatments, *Agadtantra* has largely remained underrepresented in modern clinical discourse. However, the evolving landscape of public health has revived interest in its relevance. Contemporary challenges-such as endocrine-disrupting chemicals (EDCs), occupational and environmental hazards, drug abuse, and dermatotoxicity-highlight the need for a multidisciplinary and integrative approach to toxicology<sup>(1,2)</sup>.

**Purpose of the CME**

Recognizing this, P.D.E.A.'s College of Ayurved and Research Centre, Nigdi, Pune, organized a one-day national Continuing Medical Education (CME) program titled "AMRUT-2025 – Exploring New Horizons in *Agadtantra*" on 14th June 2025. This initiative was aligned with the recent undergraduate (UG) and postgraduate (PG) curriculum revisions by the National Commission for Indian System of Medicine (NCISM), New Delhi, which emphasize a more practice-oriented and interdisciplinary approach to *Agadtantra*<sup>(3)</sup>.

The CME brought together 166 delegates from across India, including students, faculty, and researchers, with the aim to promote practical applications, discuss curricular reforms, and explore research opportunities in *Agadtantra*.

**Relevance to Contemporary Health Challenges**

Current health issues such as chronic exposure to pollutants, accidental poisonings, and substance-related disorders resonate with the traditional concerns addressed in *Agadtantra*. Modern exposure to heavy metals, pesticides,

synthetic additives, and pharmaceuticals parallels the ancient Ayurvedic classifications of dushi visha (accumulated toxins) and gara visha (artificial poisons)<sup>(4)</sup>. This convergence offers an opportunity for Ayurveda to contribute meaningfully to public health toxicology.

Moreover, recent advancements in molecular docking, in silico studies, and network pharmacology allow researchers to validate classical formulations described in texts such as *Charaka Samhita* and *Rasaratna Samuccaya*<sup>(5,6)</sup>. These technologies help elucidate the mechanisms of action of herbs and formulations used traditionally for detoxification and antidotal therapy.

**Research and Evidence-Based Integration**

Despite its rich textual foundation, *Agadtantra* lacks robust clinical validation. There is an urgent need for methodologically sound research that adheres to reporting standards such as CONSORT for clinical trials and STROBE for observational studies, both supported by the EQUATOR Network<sup>(7)</sup>. The use of **standardized toxicological models**, phytochemical profiling, and interdisciplinary collaborations with modern pharmacologists and toxicologists can facilitate its integration into contemporary healthcare.

Studies have already begun to explore the antioxidant, hepatoprotective, and detoxifying properties of classical formulations like *Triphala*, *Guduchi*, and *Vasa*, but large-scale and reproducible trials remain limited<sup>(8,9)</sup>.

**Future Directions**

Moving forward, institutions must prioritize:

- **Research training** in *Agadtantra* aligned with modern methodologies.
- **Interdisciplinary collaborations** with forensic medicine, pharmacology, and public health.
- **Curriculum reforms** that integrate hands-on toxicology practices and digital tools.

- **Documentation and publication** of case studies and clinical trials in indexed journals.

Events like AMRUT-2025 serve as critical platforms to catalyze innovation and reignite academic interest in Agadtantra. By applying evidence-based frameworks and maintaining transparency in reporting, the field can mature into a clinically relevant discipline.

**Conclusion :** As we navigate the evolving landscape of modern medicine, Agadtantra stands as a testament to the profound depth and foresight of ancient Ayurvedic wisdom. Traditionally rooted in the management of poisons and toxins, this branch now offers vast potential beyond its classical boundaries. With growing concerns around environmental pollution, chemical exposure, drug toxicity, and food adulteration, Agadtantra is more relevant than ever. By integrating contemporary scientific methods with classical Ayurvedic principles, new horizons are being explored—from forensic applications to preventive healthcare strategies. The revival and modernization of Agadtantra can not only enrich toxicological understanding but also foster holistic approaches to public health and wellness.

The journey forward calls for collaborative research, curriculum enhancement, and clinical application, ensuring that Agadtantra continues to evolve as a dynamic and indispensable part of Ayurvedic science in the modern era.

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