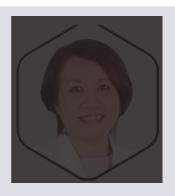


## TRANSFORMING TOXICOLOGY LANDSCAPE FOR SAFER AND SUSTAINABLE TOMORROW

## **INVITED SPEAKERS**



## Dr Uyen Vy Doan (Vanessa) is a Medical

Toxicologist and Specialist in Toxic Diseases in Cho Ray Hospital, Vietnam. She is interested in Medical Toxicology, she learnt about medical toxicology by herself when she was a medical student. She got a scholarship for three-month training course for clinical toxicology in Taiwan in 2014 and won a full ICDF scholarship for twoyear Master's degree, International Health Program concentrating on Medical Toxicology in Taiwan. She is interested in chronic poisoning and unusual poisoning cases, especially traditional herbal poisoning and heavy metal poisoning. She has experience in doing research on traditional herbal poisoning, occupational toxicology, Cordyceps fungus poisoning, biguanide poisoning, snakebites, marine toxicity. She had worked and pursuit for the Medical Toxicology field, Cho Ray Hospital for 16 years. She had the main responsibility for the outpatient room for medical toxicology focused on chronic poisoning or toxic diseases and ran Poison Control Center in nearly 3 years (2021 - 2023). Now Dr. Vanessa has still run hotline Poison Help by calls from provincial physicians in the South of Vietnam, examines and manages patients who have chronic poisoning and follow them up long time.

## Traditional Medicine: Divine Faith and Silent Killer

**Introduction**: Natural toxins or natural toxic substances in the formulation of herbal medicines are rarely mentioned or hidden in traditional treatments. Traditional herbal medicine poisoning has increased, but silently, often masked by chronic medical issues with an unknown cause.

**Methods**: A retrospective descriptive study was performed by reviewing records from the years 1997 to 2024 of 7 hospitals in the South of Vietnam. All cases of herbal medicine poisoning that were diagnosed by the author were collected, and samples of herbs were also collected where possible, from patients. Some samples were checked for heavy metals depending on their clinical signs and symptoms, diagnosis and history. Tests for heavy metals were used by ICP – MS in Vietnam and some samples was detected by ICP-AES in the US.

Results: There were 193 cases (2018 – 2024) and 66 samples of herbal medicine, including 50 different pills and capsules, 3 soft samples, 7 powder samples, 4 liquid samples and 2 mixed herbal samples (1997 – 2024). The samples were analyzed for the metals of arsenic, mercury, lead, or copper, depending on the clinical presentation of each case. The diagnosis was considered by using the Individual Toxic Agent Screening (ITAS) conducted by the author. The characteristics of chronic herbal medicine poisoning were for patients that had been managed by an internal medicine or other specialist for weeks or years, with no improvement after treatment, or continued unknown diagnosis. If an acute herbal poisoning was admitted in critical condition, they often died soon afterwards with multiple organ failure and an unknown cause. Most cases of chronic herbal medicine poisoning were related to heavy metal toxicity, and the signs and symptoms would determine the decision of whether to chelate or not.

The results of heavy metal analysis in drug samples sent in the US showed that all samples contained very high concentration of heavy metals of As, Hg, Cu, Pb. Other samples were tested in Vietnam. All of these samples contained As, and 6 samples had relatively high concentrations of As and Hg. Besides, there were 2 samples containing dexamethasone. Phenformin was detected in 22 samples, and 2 samples had phenformin and metformin. There were 2 cases detected saponin in blood and wine samples.

**Conclusion**: The use of the ITAS method is crucial in diagnosis and to determine the source of toxic agents for toxic diseases in general, and particularly in traditional medicine poisoning. Traditional medicine can cause silent, chronic poisoning when people trust that the natural ingredients of herbal medicine are safe and effective.