

POISONOUS PLANTS OF TURKEY

Week 1

General Information

Toxin, venom, poison?

Venom is toxin, toxin is a poison but every poison is not a toxin....???

What is poison?

Poison is a substance that **disrupts the physiological tasks** with its chemical effects when it comes into contact with the organism and kills the organism according to its quantity.

What is poison?

When any substance is **ingested, inhaled, absorbed** or **injected**; if it damages the structure of the organism and disrupts its functions - even in small quantities- it is called POISON and the event is called POISONING.

TOXIN: It is a **biologically produced** chemical substance, causes disorders in the functions of another organism. (TDK (=TLS=Turkish Language Society) Pharm. Dictionary: Toxic product produced by bacteria, animals or plants.)

VENOM: (TDK Big Dictionary) Venom is toxin which is produced by some arthropods such as snake, scorpion, bee and spider, including hyaluronidase, phospholipase, transaminase, phosphodiesterase, DNase, ATPase, alkaline phosphatase and ribonuclease and is injected by a bite or sting. It is exclusive to animals.

After venom is taken into the living body, Symptoms may vary depending on dose and individual sensitivities. In general the affected organ systems: cardiovascular, respiratory and central nervous systems.

Lets make things simple:

-**Venomous** - it bites, you die.(Snake).

-**Poisonous** - you bite, you die (Atropa belladonna fruit).

-**Toxin** - biologic **poison**

-The first historical records of poison and poisonings are about 5000 years from now.

-First pharaoh Menes studied toxic and medicinal plants in BC 3000 and tried to cultivate these plants.

It is known that this tradition had been continued throughout the Egyptian dynasty until the last Pharaoh.

Poisonous snakes and insects were important in ancient Egypt. They have included these animals in their faith systems and they believed they would be protected from them by magic.

-There are some notes on the use of poison in Mesopotamian tablets, in ancient Chinese and Indian written sources.

The Egyptians didn't use the poison for assassination or killing, as it was the case in the ancient Greek and Roman periods. In this sense, III. Ramses is an exception.

According to written sources, after the assassination of III. Ramses by using poison, he lived for 15 days. This suggests that a long-acting poison, such as **ricin**, could have been used. It is obvious that the ancient Egyptians, who were known to use **castor bean oil** for treatment, were aware of the toxic effect of the plants.

**** CLEOPATRA (VII.), Ruled between 51 and 30 BC, is generally known for its curiosity with science, particularly pharmacology and botany.**

**** Eye liner, aromatic oil, medication for baldness, some antiseptic and cosmetic preparations have been prepared by herself.**

**** She had a deep knowledge of poisons.**

**** She tried to determine the toxicity limits of a body by giving the poisoned lotions to the slaves at different doses.**

It is estimated that she attempted suicide with cobra venom and lost her life.

Before his death, **Alexander the Great** (356-323 BC) was travelled to India, Pakistan, Iran and Iraq. Especially in India, Indian physicians were accompanied to his army and is known to give him **exotic medicinal plants, poisons and minerals.**

Alexander was a emperor who had the pleasure of experimenting with various effective drugs. Again, it is thought that he **lost his life as a result of such an attempt.**

The cases of poisoning were quite high in antiquity. To protect the people against all known poisons, a **universal antidote or in another word **theriac** was prepared which was quickly become a very valuable product.**

According to Galenos and Plinius, the first **theriac formula prepared against the toxic animal bites was written on a stone in the **Temple of Asclepius** on the **island of Kos**.**

This formula includes thyme, myrrh (*Commiphora myrrha*), anise (*Pimpinella sp.*), Fennel and parsley (*Petroselinum crispum*).

Various medicine formulas have been developed by many physicians in the Middle Ages and later.

The word «theriac»" originates from the Greek word «therion».

This word was first used as the equivalent of the word antidote and then started to be used as a panacea.