

Developing Herbal Antidote or Method of Combact Poisoning

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Abstract

Poisoning is the last consequence of drug action that is harmful to the body. It may be due to overdose or prolonged use of a drug. Any substance that causes deleterious, unwanted and harmful effects on the body is called poison. Poisoning can be acute or chronic. Short time exposure of poison is called acute poisoning whereas repeated, long term or continuous is called chronic poisoning. In chronic poisoning, symptoms may not be seen after each exposure and may be seen after a long period. Poison can cause effects when they are orally taken, injected, swallowed, inhaled or even rubbed on the skin. Commonly observed poisons are pesticides, organophosphates, carbon monoxide, heavy metals, certain plants such as Datura, Cannabis, opium, etc. All of the drugs acting on the nervous system, cardiovascular system, peripheral nervous system, urinary system, and reproductive system can turn to poisons if used in excess quantity. Almost all categories of drugs are involved in one or other forms of toxic effects depending on the dose. Briefly, all drugs in excess can cause poisoning. The effect of poisoning is ranging from short term illness such as rash, diarrhea, seizures, dilated pupils, nausea to long term complications such as organ damage, coma or even death. Poisoning can be accidental, homicidal or suicidal. The diagnosis of poisoning is based on assessing clinical features history, physical examination and toxicological screening. Such toxic effects must be carefully monitored and treated immediately to save the life of a patient. Assessing the symptoms of poisoning, providing life support to maintain vital signs, elimination of poison, preventing further exposure of poison, and use of the antidotes are the basic principles of management of toxicity. With this background, it becomes essential and interesting to elaborate on the detailed study of poisoning and its management. The present review is therefore planned to know the types, nature, principle, diagnosis, effects and general management of poisoning.

Keywords: Acute Hepatic Failure Poisoning ,Amatoxin ,Antidote,Silibinin

Introduction

Poisoning is injury or death due to swallowing , inhaling , touching or injecting various drugs , chemicals , venoms or gases. Poison is something that causes harm. The term is used in a wide range of scientific fields and industries. Many substance such as drugs and carbon monoxide are poisonous only in higher concentrations or dosage. Poison is a highly toxic saliva containing Zootoxins that facilitates in the immobilization and digestion of prey.

Modes of poisoning –

- Insect bite poisoning

- Alcohol poisoning
- Berries and seeds poisoning
- Food poisoning
- Carbon monoxide poisoning
- Hazardous chemicals

Remedies of Poisoning

- Activated charcoal – sometimes used to treat someone who's been poisoned; the charcoal binds to the poison and stops it being further absorbed into the blood.
- Antidotes – these are substances that either prevent the poison from working or reverse its effects.
- Sedatives – may be given if the person is agitated.
- Ventilator (breathing machine) – may be used if the person stops breathing.
- Anti-epileptic medicine – may be used if the person has seizures (fits).

Symptoms and Sign

- Breathing difficulties
- Dizziness or Weakness
- Being sick
- Sudden, noticeable heartbeats
- Uncontrollable restlessness or agitation
- Nausea, Vomiting, Diarrhoea
- Drowsiness or loss of consciousness
- Stomach pain
- Headache and loss of appetite
- Mental confusion

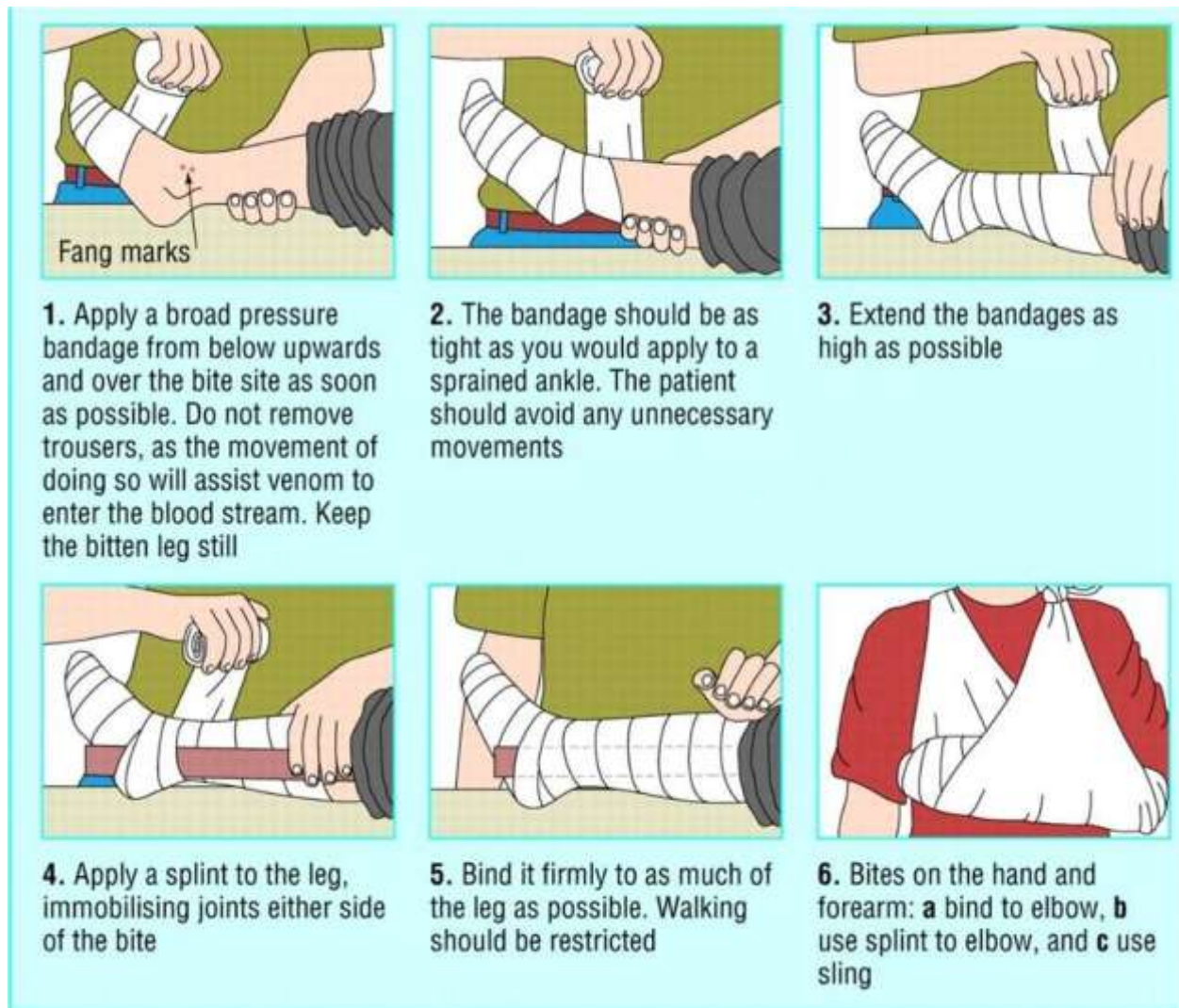
Physiological effects of different types of poison

- **The four distinct types of poison act on the body differently:**
 1. Proteolytic poison dismantles the molecular surroundings, including at the site of the bite.
 2. Hemotoxic poison acts on the cardiovascular system, including the heart and blood.
 3. Neurotoxic poison acts on the nervous system, including the brain.
 4. Cytotoxic poison has a localized action at the site of the bite.
 5. Poisoning can cause short term effects like a skin rash or brief illness.
 6. In serious cases it can cause brain damage, Coma or death.

Treatment of Poisoning

- **Traditional Method:-**

1. Cut a bite wound.
2. Attempt to suck out venom.
3. Apply tourniquet, ice, or water.
4. Give the person any other medications necessary
5. Antivenoms remain the only specific treatment that can potentially prevent or reverse most of the effects of snakebite envenoming when administered early in an adequate therapeutic dose.



Management of Poisoning

1. First aid treatment
2. Transport clinical assessment

3. Detailed clinical assessment and species diagnosis
 4. Investigation/laboratory/tests
 5. Anti-poison treatment
 6. Observing the response to antivenom
 7. Deciding whether further doses(s) of antivenom are needed
 8. Supportive treatment
 9. Treatment of the bitten part
 10. Treatment of chronic complications.
- **The Most effective treatment of snake poisoning is by using “Annona reticulata” leaves.**



- **Scientific Classification**

1. Botanical Name : *Annona reticulata*
2. Kingdom : plantae
3. Order : Magnoliids
4. Family :Annonaceae
5. Genus : *Annona*
6. Species : *Annona, reticulata*

Uses:-

- reticulata are used as source of medicine and also for industrial products.
- It possesses several medicinal properties such as anthelmintic, analgesic, anti-inflammatory, antipyretic, wound healing and cytotoxic effects.
- Traditionally it has been employed for the treatment of epilepsy, dysentery, cardiac problem parasite and worm infestations, constipation, hemorrhage, bacterial infection, dysuria, fever, ulcer and as insecticides.
- Bark is very powerful astringent .
- Used as leaves used for helminthiasis treatment.

Aim:Herbal antidote for poisons and poisonous bites.

Objective:

1. To study the pathophysiology behind poisoning.
2. To study and develop herbal antidote for poisoning.
3. To study the effect of natural antidote in poisoning.

Literature Survey

Sr no	Name of author	Name of article	Summary
1	Chinamay D. Deshmukh <i>et al.</i> (2020)	General principles, types, diagnosis and management of poisoning	Introduction of poisoning
2	Jagadish Chandran. Bhuvana Krishan (2019)	Initial management of poisoned patient	Management of poisoning
3	Michael W. Shannon (2020)	Emergency management of poison	Physiological effect of different types of poisoning
4	M. Prathapa Reddy <i>et al.</i> (2015)	Pharmacognostical evaluation on the medical & nutritive fruits of raamaphal - <i>Annona reticulata L.</i>	Classification and Uses of <i>Annona reticulata L.</i>
5	Chaitanya Mittal. <i>et al.</i> (2020)	Toxicoepidemiology of poisoning exhibited in Indian population from 2010 to 2020: a systemic review and meta-analysis	Study of poisoning
6	Kavya Shaj <i>et al.</i> (2017)	Treatment approaches for management of poisoning in India	Treatment, approaches in poisonings

- **Plan of Work**

1. Selection of suitable topic.
2. Study of the topic in details to fetch aim and objectives.
3. Literature survey covering of all the aspects of objectives.
4. Collecting all the requirement for the formulation of herbal antidote

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