

Role of Ayurveda in Emergency Management

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Abstract

An emergency is a condition requiring immediate treatment where the patient with this is either conscious or unconscious. A medical emergency is an injury or illness that is acute and poses an immediate risk to a person's life or long-term health. Ancient Acharyas used various terms like Sadhya, Ashu, and Twarita in emergency conditions where quick management is needed. It is the right place to mention the reference to Sushruta Samhita in which Acharya has prescribed to use of specific methods in emergency conditions. It is believed that emergency treatment in Ayurveda is not present and in emergency one needs to take only allopathic medicines, and Ayurveda has a limited role to play in chronic ailments only. Ayurveda to become the main line of medicine needs to have emergency management. Emergency management was described in Ayurveda, which needs only enlightenment. Aim and Objectives: To study the Ayurvedic basis of emergency management. To study the text for necessary reference that describes emergency management. Material and Methods: Relevant Ayurvedic and modern literature is the material of the paper. Old Ayurvedic treatises. Discussion: Ayurveda can also be useful in emergency conditions and life-threatening conditions. Conclusion: Here it may be concluded that Ayurvedic medicines are useful in the management of emergency conditions.

Keywords

Ayurveda, Emergency medicines, Atyayika, Twarita, Aashu

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1. Introduction

An emergency is a condition that requires immediate treatment where the patient is either conscious or unconscious. Acute or emergency diseases are very well treated by Ayurvedic treatment, and it was proved from the Ayurvedic texts so the role of Ayurveda in Emergency Treatment. is also very important. There is no doubt that modern medicines have saved millions of lives and emerged as the best option to go to in the case of severe illness. Side by side, it often comes with some complications and side effects, as it doesn't cure a disease of its root cause. But Ayurveda plays a big role in emergency conditions because the scientific principles of Ayurveda handling the emergency in classical compendium were the research done ages ago by the seers. Ayurveda is also known as the "Science of Longevity" because a complete system to live a long healthy life is available here. This field rejuvenates the body through proper diet and nutrition and provides a great system for empowerment, a system of freedom, and long life. The Ayurvedic field is a traditional system of medical treatment and time-tested treatment existing in India for more than 5000 years, and it is endowed to the world by the Sages of ancient India. The Ayurvedic field is mainly based on a holistic approach to the treatment of disease, maintenance of health, and outlook on life in general. Acharya Charaka has cleared the concept of treatment on the classification of Mridu (mild) and Daruna (severe). Daruna is a condition where the disease is acute or requires prompt treatment, but it doesn't mean that it is incurable. Acharya charaka clearly said there are many such diseases which though acute and severe are yet curable.

1.1. Aims and Objective

The primary objective of this study is to delve into the Ayurvedic foundation that underlies the realm of emergency management. With an emphasis on the ancient Indian system of medicine, Ayurveda, this research endeavours to uncover the principles, practices, and holistic perspectives that guide the approach to handling critical and urgent healthcare situations.

2. Materials and Methods

The material and methods section of this study relies on a comprehensive review of both relevant Ayurvedic and modern literature, which serves as the foundation for the research. The study draws extensively from ancient Ayurvedic treatises, leveraging the wisdom and insights preserved in these age-old texts. These classical Ayurvedic sources, renowned for their depth of knowledge and holistic perspectives, provide a rich repository of information on traditional healthcare practices and emergency management strategies.

2.1. Emergency Management of Diseases

Charaka also says 'This is quite adequate for the average physicians for the practical purpose of treatment; for the highly intelligent, who are proficient in the art of inference; it will serve as a guiding principle for the comprehensive knowledge, not mentioned here.

2.2. Principles of Management

Ayurveda suggests a few routes of drug administration that bypass digestion and act in Emergency & certain other modalities – *Nasya*, Sublingual, *Basti*, *Suchi*, *Rakta-Mokshana*, *Lepa* etc.

- **Sub-Lingual** - Sublingual mode is selected as it has profuse network of blood vessels and enters directly into systemic circulation. It is economical as well and the drug absorption is very quick as it avoids the first pass of the drug. Honey is mainly used for its *Yogavahi* property as it acts as a drug vehicle as well as catalyst. *Pottali Kalpa yogas* with popular dosage forms that are commonly used through this route. It can be used comfortably in unconscious patients also.
- **Nasya** - Olfactory and gustatory nerves are comparatively closer to the higher centres of brain than other nerves. Bio-availability of the drugs is 55-100% as the drug skips first pass metabolism (directly enters into circulation without getting processed in the gut). This route provides rapid delivery of drug across the large surface area of the mucus membrane of respiratory tract. Drug is delivered directly to the site of action and systemic effects are minimized.
- **Basti** - The rectum has a rich source of blood and lymph supply. The substances administered are readily absorbed from rectal mucosa into blood stream of villi through intestinal mucosa by osmosis. The Gastro-intestinal tract has its own nervous system called enteric nervous system lying in the entire wall of the gut. The sigmoidal, rectal and anal regions of large intestine are better supplied with parasympathetic fibers (which are more stimulatory in action) than other portions. Hence *Basti*, though administered in the *Pakwashaya* and remains only for shorter duration in the body has a systemic action throughout the body. Hence *Basti* was given a prime place in *Ayurveda* for its broad-spectrum activity and efficacy in controlling *Vata Dosha* which is considered to be the chief causative factor in most of the emergencies in one way or another.
- **Lepa**- Application of drugs directly to skin introduces drug into the loose subcutaneous tissues achieves systemic effect. The absorption is reasonably slow, uniform but smooth. The rate of absorption depends on the physical properties of the drug and skin at the site of application. This route is mostly used for sustained delivery of drug. First pass metabolism is avoided and the Gastric factors.

2.2. Drugs for Emergencies

2.2.1. Ayurveda formulation for Asthma (Tamaka Shwasa)

- *Sitopaladi churna* reduces chest congestion.
- *Kantakari Avaleha* reduces the frequency of asthmatic attacks.
- *Talisadi churna* offers relief for allergic bronchitis.
- *Vasarishta* acts as expectorant.
- *Padmapatradi yoga* increased peak expiratory flow rate.
- *Shwasakuthar Rasa* reduces obstruction - *Shwasakuthar Rasa* helps to maintain normal Respiration.

2.2.2. Management of Cardiac Emergency

Combination may give relief in cardiac problems.

- Hingu churna, Lavana & lemon juice.
- Hingu churna, Lavana along with other hridya aaushadha.
- Hingu churna, Lavana & Gokshru Panchamula.
- Hingu churna & Bilvadi Panchamula.
- Haritaki, nagar, puskarmula, hibera & hingu.
- Decoction of kshara, matulung, shati, puskarmula

- Shunthi, palasha & vacha

2.2.3. Management of other acute fevers

Following drugs help to pacify aggravated pitta, reduces toxins and maintain body thermostat.

- Praval Pisthi
- Godanti Bhasma
- Tulsi Powder
- Giloy Satva
- Tribunkirti Ras
- Shadanga Paniya
- Amritasthak Kwath
- Ananda bhariva Ras

2.2.4. Management of Dehydration

- Karpoor Rasa
- Lemon juice, honey with water
- Shankh bhasma to control frequency of stool.

2.2.5. Management of Sannipat Jwara

An investigation study report efficacy of following kwath in fever - Pitta papada, Amaltas, Musta, Brahmi, Daksha, Dashmoola.

2.2.6. Ayurvedic Management of Surgical Emergency and Trauma

- **Nasa Sandhana**- Reconstructive surgery of nose mentioned by Sushruta resembling plastic surgery.
- **Karna Sandhana**- Reconstructive surgeries of ear lobule caused by trauma or injury.
- **Anorectal Techniques**- Fistulous tract such as langalaka, ardhlangalak, sarvatobhadrak, gotirthak & kharjurpatrak may also remove by ayurveda para-surgical procedure.
- Sutures for baddhagudodara and chhidrodara also mentioned in Sushruta Samhita.
- Asthisandhi bhagna chikitsa for the management of fracture/displacement of bones.
- **Management of Hemorrhage**¹²- Acharya Sushruta explained about the management of haemorrhage in detail which can be described in 4 types.

2.2.6.1. Local Application

2.2.6.1.1. Lodhradichurna

In case of haemorrhage powder of Lodhra (*Symplocos racemosa*), Madhuka (*Glycyrrhiza glabra*), Priyangu (*Callicarpa macrophylla*), Patanga, Gairika (Fe_2O_3), Sarjarasa (*Shorea robusta*), Rasanjana (extract of *Berberis aristata*), Salmalipuspa (*Salmalia malabarica*), Shankha, Shukti, Masha, Yava and Godhuma should be sprinkled on the wound and pressed into the wound with the fingers.

2.2.6.1.2. Saladichurna

Powder of bark of Sala (*Shorea robusta*), Sarja, Arjuna (*Terminalia arjuna*), Arimeda (*Acacia fernasiana*), Meshashringi (*Gymnema sylvestre*), Dhava (*Anogeissus latifolia*) and Dhanvana (*Grewia tiliifolia*) or ash of Kshauma (flax) or powder of Samudraphena and Laksha should be sprinkled on the wound. Tight bandaging should be done by using any bandaging material.

2.2.6.1.3. Sheetal Upchar (Cold Therapies)

A moist cloth should be covered on wound or on patient and put him in a cold room, cold poultices should be applied on bleeding wounds. Cold liquids can also be poured.

2.2.6.1.4. Ksharkarma or Agnikarma

In case when the above measures can't stop bleeding then bleeding vein or wound area should be burnt by Kshara (caustic alkali) or by direct fire (red hot rod).

2.2.6.2. Oral Medication

- The decoction of Kakolyadigana added with sugar and honey should be given to drink in case of hemorrhage.
- In critical case of hemorrhage, the whole blood of deer, antelope, camel, rabbit, buffalo or boar could be given to drink. It was the original concept of Acharya Sushruta, which was later established as blood transfusion.

2.2.6.3. Raktasrava Nirodha Karma (Methods of Management of Hemorrhage)¹³

The above management to prevent the hemorrhage can be concluded in four types of methods as follows.

2.2.6.3.1. Skandana

It means to promote clotting. Cold drugs or materials are used for this purpose. These drugs or materials make the blood to clot. First this method should be used.

2.2.6.3.2. Sandhana

Joining the edges of the wound is called sandhana. The astringent drugs are used for this purpose. If the bleeding cannot stop by skandana karma, then this method should be done.

2.2.6.3.3. Pachana

The drugs which adhere the wound by their coagulation effect are used in this method like ash or alkali materials. In condition of failure of sandhanakarma it should be done.

2.2.6.3.4. Dahana

Direct heat can coagulate and constrict the veins. Thus, provide the haemostasis. This is the best method for haemostasis which should be done in case of failure of the above three methods of haemostasis. This process is done by electric cautery in modern medical science.

2.2.6.3.4.1. Management of Daha (Burn)¹⁴

- The Plushtadagha (burns of the first degree) is treated by warming the affected part and medicines which have hot potency should be administered.
- In Durdagha (burns of the second degree) both warm and cold therapies should be done. But use of ghee, application of poultices and fomentation of body should be done in cold state.

- In the management of Samyakadagha (burn of third degree) at first ghee processed with Tugakshiri (*Bambusa arundinacea*), Plaksha (*Ficus lacor*), Chandana (*Santalum album*), Gairika and Amrita (*Tinospora cordifolia*) should be applied over the body. The body temperature should be maintained.
- In Atidagha (burn of the fourth degree) at first the hanging muscles should be removed then cold therapies applied. A paste of broken rice, bark of Tinduki (*Diospyros peregrina*) mixed with ghee should be locally applied. The line of treatment of pittaja visarpa (erysipelas) should be performed in this condition.
- For the all kinds of wound a medicated ghrīt made with Madhucchishta, Madhuka, Rodhra, Sarjarasa, Manjishtha (*Rubia cordifolia*), Chandana (*Santalum album*) and Murva (*Marsdenia tenaciissima*) is the best.

2.2.6.3.4.2. Dhumopahata (Suffocation by Smoke) Management¹⁵

The management of dhumopahata can be divided in four steps as

2.2.6.3.4.2.1. Vamankarma (Stomach Wash)

At first induced vomiting or stomach wash should be done by any of these materials- Ghee, juice of sugar cane, draksa, milk, sugar water, sweet or sour tastes things. Vamankarma also subsides the debility, sneezing, fever, burning sensation, fainting, thirst, flatulence, dyspnoea and cough.

2.2.6.3.4.2.2. Kavalagraha (Mouth Gargles)

The second step is mouth gargles with lukewarm liquids of sweet, salt and sour tasting medicines. This can improve the sensory system and mind so that a person will be able to perceive objects by all the sense organs.

2.2.6.3.4.2.3. Shirovirechan

The third step is doing shirovirechan (nasal medication) by purgative medicines. These medicines clean the head through nasal route. By this process vision, head and throat becomes clear.

2.2.6.3.4.2.4. Ahara (Diet)

Diet should include light food, with oil or ghrīt and those which do not cause burning sensation.

2.2.6.3.4.3. Moorchha (Fainting) Management¹⁶

A person may faint in condition of fear, severe pain or due to other medical illness. In this condition the patient should be sprinkled with cold water on face and his vitals (Nadi, Hridaya, Shwasa etc.) should be monitored regularly and protect them. An effort should be made to increase his willpower and positivity.

2.2.6.3.4.4. Jalamagna Moorchhita (Drowning) Management¹⁷

The person who is submerged in water and get fainted should be held with his head in a down position and his abdomen should be pressed or body shaken to remove water from abdomen and lungs. Induced vomiting should be performed or buried in a heap of ash up to his face.

2.2.6.3.4.5. Kanthpidana (Throttling) Management¹⁸

Accidentally or intentionally severe throttling or strangulation or hanging is an emergency condition. Acharya Sushruta explained that in this condition vata and kapha dosha gets aggravated and blocks the passage of the throat. This condition should be managed by massage with oil, give fomentation, administered with strong shirovirechak medicines by nasal route, and should be given soup of meat which having vatahara (mitigating vata) properties.

2.2.6.3.4.5. Kanthpidana (Throttling) Management¹⁸

2.2.7. Ayurvedic Procedure for Management of Poisoning

- Arishta/Venikabandhana
- Utkartana
- Nishpeedanam
- Chushana
- Agnikarma
- Parisheka
- Avagahana
- Raktamokshan
- Vamana
- Virechana
- Upadhana
- Anjana
- Prativisha

“TWARAYA JAYET” mentioned by Acharya Charaka in Ayurveda as approach of prompt treatment for management of medical emergencies. Such as

Table 1. Approach of prompt treatment for management of medical emergencies.

DISEASE	EMERGENCY MANAGEMENT
Hyper-pyrexia (Ch.Chi.03/174-175)	Cold sponging, following <i>kwath</i> was given repeatedly every 3 hrs. (1) <i>Tagar</i> (2) <i>Musta</i> (3) <i>Katuki</i> (4) <i>Dashmoola</i> .
<i>Hikka-Shwasa</i> (Ch.Chi.17/131-135)	<i>Stridugdha nasya, lahsun-pyaaaj-grajnak swaras nasya.</i>
<i>Ashmari</i>	For diuresis- <i>Trunapanchmool, Gokshura</i> etc drugs in the form of <i>yavagu</i> is given 2-3 times a day.
<i>Garbhasrava-paat-Moodhgarbha</i>	To prevent this our acharyas put forward some regimen.
Medico-legal emergencies (Ch.Chi.23)	<ul style="list-style-type: none"> ▪ In acute ingested poisoning induced emesis is essential indication, the induced emesis should be given decoction of <i>ikshvaku</i> seeds. ▪ In case of poison situated in <i>pakwashaya</i> decoction of <i>nalini-phala</i> along with ghee for induced purgation. ▪ In all cases of snake bites ligature of cloth (<i>arishtabandhana</i>), incision, cauterization and sucking.

3. Results and Discussion

The basic principle of management of emergency condition is still relevant and it is more elaborated in modern medical science. Emergencies need immediate care and need not follow the general rules. Clinical decision making and immediate response is very important in emergency conditions¹⁹. Ayurveda can also be useful in emergency conditions and life-threatening conditions. Some examples are cited in the paper to justify that ayurveda can also be useful in emergency conditions. The study of literature reveals that ayurvedic scholars were aware of medical, surgical and gynaecological emergencies are the appropriate management is prescribed.

4. Conclusions and Future Scope

Ayurveda has immense potential to create a healthy society by maintaining and sustaining the health of coming generations. Every individual has to adopt Ayurveda in their daily life to get a healthy and disease-free life. Ayurveda contains numerous herbs that work well in acute as well as chronic diseases, so the Role of Ayurveda in Emergency Treatment is also very important. Don't compromise your health with harmful chemicals and adulterated medicines. "Health is Wealth", so, adopt Ayurveda in daily life to boost the immunity and prevent your health from various harmful infections and diseases.

Here it may be concluded that Ayurvedic medicine is useful in management of emergency conditions.

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