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## Review Article on Pranapratyaagaman (Resuscitation)

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**Abstract**

Newborn is a child under 28 days of age and this is most vulnerable period. Care of the newborn right from just after birth till the first feeding has been described by the classical text of Ayurveda. As per Ayurveda, Navajata means Sadyojata (Just born child). Various procedures were advice in the management of Newborn child by Acharya with few differences in opinion regarding the sequences of those procedures. The steps of Navajata Shishu Paricharya are Ulvaparimarjana, Pranapratyagamana, Nalachhedana, Pichudharana, Garbhodaka Vamana etc. These procedures of Navajata Shishu Paricharya revealing their scientific relevance and utility in care of Newborn. These steps are important for the Newborn for preventing birth asphyxia, incidence being 1-6 per 1000 live birth.

**Keywords:** Pranapratyagamana, Navajata shishu, Resuscitation, Asphyxia

**1. Introduction**

Newborn babies' neonates truly constitute the foundation of human life. They have unique health issues and problems due to structural and functional immaturity of various body organs depending upon their gestational age and birth weight. All these procedures are aimed to revive the unconscious baby by initiating resuscitation, pulse, heart rate like vital functions. When we compare modern methods of resuscitation, principles adopted behind these procedures explore scientific knowledge <sup>[1-2]</sup>.

### अश्मनोः सम्यट्टनम् कर्णयोमुले

This is the first procedure that should be done when the baby is not crying or Achestha. Two stone pieces are taken and stroked together to produce a dull sound near the base of the ear (mastoid process). This leads to the stimulation of respiration. Receptors for different sensations are present in the skin, like the receptors for pain, heat, vibration, pressure, crude touch, fine touch etc. As we know all the sensations from the peripheral parts of the body are carried through the sensory tract. These sensations are carried through the sensory tract in the posterior lobe of the spinal cord. These fibers are riches to the hypothalamus and then cross to the opposite side. When it crosses, it also gives a branch to the respiratory Centre therefore, an extreme degree of sensory stimulation is always associated with stimulation of respiration this is also true in higher sensory functions like hearing, vision etc. which are connected with the respiratory Centre through respective cranial nerves. Hence stimulation of the sensory pathway is one of the easiest indirect methods to stimulate the respiratory center <sup>[3]</sup>.

The modern method of resuscitation also believes in the stimulation of respiration by the sensory stimulus. Methods of sensory stimulation are cleaning and drying of the baby along with the face, striking the palms and soles, pressure and pain sensation. Rubbing at the back (spinal cord) area is direct stimulation of the sensory pathway <sup>[4]</sup>.

### 1.1 शर्तीदकेनोष्णोदकेन वा मुखपरषिक

This is the second procedure in the sequence of resuscitation, hot and cold water should be sprinkled over the face of the baby alternatively. Sensory receptors which are abundantly present on the facial skin are stimulated by hot and cold station. Sensation will be carried through the sensory se of the facial nerve and the Trigeminal nerve to stimulus. Respiratory center. In the hot season, cold water and in season hot water can be used. Hot and cold water can be sprinkled alternatively. Sensory stimulation by hot and cold sensation for initiation of breathing-This looks to be the second method of sensory stimulation by heat-cold sensation so that the respiratory center is stimulated. In the first step, they have tried with the Shabda Guna of the Akash Mahabhoot, a failure to which necessitates simulation of Vayu Mahabhut with its Sparsha Guna (touch which is also a second-most perceptive Guna by the body).

An alternate sprinkling of hot and cold water also stimulates the sympathetic nervous system, which in turn stimulates the respiratory center. A baby with apnea can be easily awakened by this method. A sprinkling of cold water to a person during the state of unconsciousness/semi-consciousness is generally practiced in community practice, which also works on the same principle. Minor cases will be revived by this method. This should not be done continuously. If the baby is not responding after doing it three to four-time we have to go for the next step of Prana pratyagaman modern science also believes in the same that one should not waste time on giving sensory stimulation if the baby is not responding rather, quickly shift to bag and mask ventilation. Prolonged sprinkling also carries the risk of hypothermia". Thus Ashmno Sangathana looks to be the stimulation of respiration by sensation carrying in through the vestibule-cochlear pathway guided by sound stimulus, while in the case of touch stimulus, in this procedure drying causes stimulation of the trigeminal nerve pathway. Sudden cooling after birth when the human newborn baby is delivered may lose up to 600-kilocalorie per minute at room temperature provides respiratory drive by operating through trigeminal cold receptors located on the facial skin." The sudden sprinkling of cold water over the facial region may serve the purpose. The further facial area is the Adhistana [5].

## 2. Pranapratyaagaman (Neonatal Resuscitation)

The term 'Praana' is none other than life or cardio respiratory function.

The whole of the efforts to established a normal respiratory & cardiovascular functioning from a compromised life threatening status is too considered as Pranapratyaagaman vidhi [6]. 1 2

### 2.1 These needs to be discussed in 2 contexts

1. At the time of birth.
2. After the birth & in childhood.

These are emergency resuscitator methods in critical conditions of diseases, accidents etc.

### 2.2 Pranapratyaagaman at the time of birth

The activity of praanavayu in foetus shows a marked contrast to that in a neonate. During the fetal stage, the functions of pancha vaayu are entirely dependent on the mother. After birth, it has to work independently and has to perform its motor functions at the earliest (like meconium passage, urine output etc.).

## 3. Discussion

Sign & Symptoms of Asphyxiated Baby (A.H.Utt.1/3-4)

If the baby does not respond by previous mention methods and showing these signs.

1. **Atiprabal moha (Deep unconciousness):** Severely asphyxiated baby is either deeply stuporous or in coma and has marked hypotonia or flaccidity and exhibits little spontaneous limb movement.
2. **Klesanuroop rodhan asmarthata (No cry even after deep stimulation):** Due to absence of tone in vocal cord.
3. **Anavasthitha deha dhatus (decreased or unstable dhatus):** It can be referred poor oxygenation of blood or poor cardiac output due to cardio-respiratory failure.
4. **Kar, vastra, shparash asaha:** Hypersensitivity of the pain is sign of moderate hypoxia.
5. Maranav anubhavato (dyeing like appearance).

Prana Pratyagamana Vs Neonatal Resuscitation Methodology: First textual reference of resuscitation was found in Caraka Samhita. Punarvasu Atreya has described the concept of initial steps of resuscitation to revive the baby from apparent death just after birth. The same concept was given by other ancient scholars. Acarya Vagbhatta has explained the signs and symptoms of an asphyxiated newborn as prabala moha (deep unconsciousness) and Jwara" (fever), weak cry and Anawasthitha Shlesma Deha Dhatu (unsteady state of all the tissues of body). He also described general and specific measures for resuscitation of a newborn till stabilization of baby's vital signs [7].

The ancestral or conventional child care practices are by and large, based on core knowledge and wisdom although some of them may have emerged purely from institutional superstitions and unfounded beliefs. Ayurveda means knowledge of life and art of science of living. Ayurveda adds not only years to life but also life to years. Most of our health care practices have their origin in our traditions based on the core knowledge and wisdom of our ancestor. These practices are easy and a part of our lifestyle [8-9]. They are available in the footsteps of the people and they are readily acceptable to society. To promote these practices of indigenous medicines, the government of India provided the medicines called AYUSH medicine to treat common day to day illness there is a need to do further research to ascertain the efficacy and safety of these procedures comes from the Indian system of medicine. In Ayurveda the word resuscitation is replaced by Prana pratyagaman. The word meaning of resuscitation is the procedure used for apparently lifting the baby from death-like condition. The meaning of Prana pratyagaman is Re-establishing the vital Prana back in the body. Both words carry equal meaning. The procedures described in Ayurvedic classic regarding resuscitation of a newborn child are time-honored and easily available in the surroundings of human being [10-11].

## 4. Interpretation-Ayurveda and modern [12]

Nabhinal Chhedana Umbilical cord cutting Shiropichu, Abhayanga Maintain temperature Udaken Mukhe Parisheka, Ashmano Sanghatana-Stimulation.

Krishna Kapalika Shurpa Abhnispuniyata Ventilation.

Garhhodak Vamana Stomach wash Mukha Vishodhana Clear the airway.

## 5. Conclusion

The first minutes after birth are critical to reduce neonatal mortality. The measures of new born care describe in our ancient texts indicate their wisdom regarding resuscitation, prevention of hypothermia: maintain hygiene for prevention of infection and normal breathing. Various Acharya have described the care of newborn in their own measure yet its essence is the same and moreover in its intent heralds the modern day neonatology. The steps described by Acharya are close to modern day principles of new born care and basic resuscitation of new born baby. It means principle of Newborn care is not changed but now a day's used in a modified way.

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