

**USE OF ESSENTIAL ANALOGIES IN GARBHA SHAREERA
(EMBRYOLOGY)**

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ABSTRACT

Anatomical terminology is a scientific terminology used by anatomists, health professionals such as doctors, physicians and pharmacists. It facilitates communication and exchanges between scientists from different countries of the world, also used daily in the fields of research, teaching and medical care. Similarly, *pramaanas* (means of knowledge), can be used in *Ayurveda*, especially *upamana pramaana* (analogy). It has a great influence in describing structures or organs in *Ayurveda* anatomy i.e. *rachanaa shaareera* (anatomy). The anatomical structures are most extensively described using *upamaana pramaana*. The qualities and morphology of entities like semen (*shukra*), menstrual fluid (*aartava*), monthly development of foetus (*masanumasika garbha vriddhi krama*), are best described using the references from *upamaana pramaana*. *Upamaana pramaana* is a method of perceiving knowledge of an unknown object by comparing with a known object. The aim of this paper is to analyse *upamaana pramaana* and signify its role in interpreting the concepts of *Garbha shaareera* (embryology).

KEYWORDS: *Garbha shaareera, Upamaana pramaana, Analogy.*

INTRODUCTION

Anatomical terminology consists of unique terms typically derived from ancient Greek and Latin words. These terms are more precise, reducing errors and ambiguity. These are not being used in everyday conversation but to reduce confusion in the field of research, teaching and medical care, also allows accurate communication. For example, in embryology the term 'morula' is produced by a series of cleavage division of the early embryo it begins to resemble a mulberry, hence the name morula. Other terminologies are, 'zygote' comes from the Greek mean yolk, 'placenta' from Latin for

cake and from Greek for flat and from German for mother cake. Similarly, *upamaana pramaana* can be used in *Ayurveda* for comparing different structures. *Upamaana pramaana / drishtaanta* is the source of knowledge regarding the known object and the object to be known. It helps to gain and learn the true knowledge (*Yatharthha jnaana*) based on the existing knowledge. Learning is most effective when it is comparison-based learning. In the period of *Samhithaas*, teachers and students (people) were closely associated with nature. So, the process of teaching and learning were

based on the environment surrounding them also known as *Loka – Purusha saamya siddhaanta* (Doctrine of signature). *Upamiti* (analogy) means knowledge gained through *upamaa* (comparison) and *karanam* (tool or the way)¹. Hence *upamaana* means acquiring the knowledge by the means of comparison. The commentator *Dalhana* says *upamaana* is the tool by which true knowledge of complicated or difficult things can be acquired with help of popular thing.

UTILITY OF UPAMAANA PRAMAANA IN GARBHA SHAAREERA

In *garbha shaareera*, it is used to describe anatomical structures.

Shukra (seminal fluid)

Shukra resembles *sphatika* (crystal) (Fig. 1) in its lustre, it is like oil and honey in its consistency.^{2,3}



Shukra (seminal fluid)



Fig. 1: upamaana for shukra
Aarthava (menstrual discharge)

In *Samhithaas*, it is mentioned that *aarthava* resembles the blood of hare, lac and does not stain the cloth. The pure *aarthava* is also compared with *gunjaaphala* (*Abrus precatorius*), *padma* (lotus), *alakhaka* (lac)

and an insect *Indragopa* (firefly). Here in accordance with the *upamaana pramaana*, *aarthava* is the *sanjnaa* and blood of hare, *gunjaaphala*, *padma*, *alakhaka* and an insect *Indragopa* are *sanjni*.^{4,5,6}



Aartava (menstrual discharge)

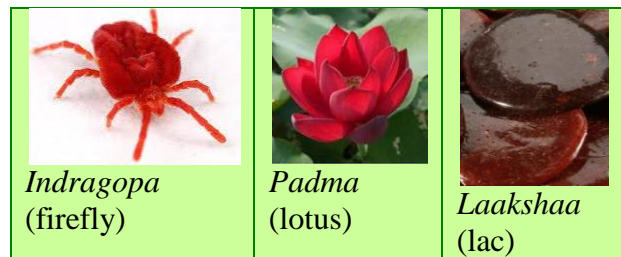


Fig. 2: upamaana for aarthava

YONI AND GARBHASHAYYAA (VAGINA AND ENDOMETRIUM)

In *Sushruta Samhitha*, it is mentioned that *Yoni* seems like the shape of *shankhanaabhi* (conch shell) and is having three spirals. In the third of these three, the *garbhashayya* is located which is like the shape of the mouth of a type of fish-*Rohitha*.⁷

According to *Gudaartha Deepika*, commentary on *Shaarangadhara Samhitha*, *Garbhaashaya* is the third *aavartta* (circle or layer) of the *yonis* and resembles the shape of a wheel.⁸





Fig. 3: upamaana for yoni and garbhashayaa

SHUKRADHARAA KALAA

In *Sushruta Samhitha*, it is mentioned that the seventh *kalaa* is the *shukradharaakalaa*, spread in all living beings throughout their bodies like ghee in the milk and jaggery in sugarcane.⁹

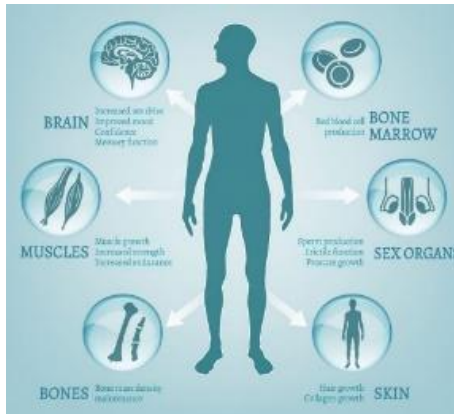


Fig. 4: upamaana for shukradharaa kalaa

RUTUKAALA (OVULATION PHASE)

Here, closing of a lotus flower after sunset is compared to constriction of *yoni* (cervix) to hinder the entry of *pum beeja* (*sperm*) into *garbhaashaya* (uterus) during *rutukaala*.¹⁰

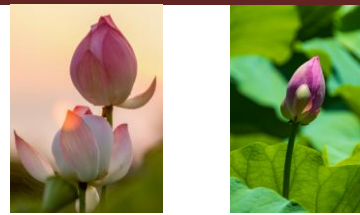


Fig. 5: upamaana for rutukaala (lotus after sunset)

GARBHAPOSHANA

An elongated tube-like structure (umbilical cord) connects the umbilicus (*naabhi*) of the foetus and the heart (*hrudi naadi*) of the mother from which foetus (*garbha*) derives nourishment just like a corn field from the aqueduct.¹¹

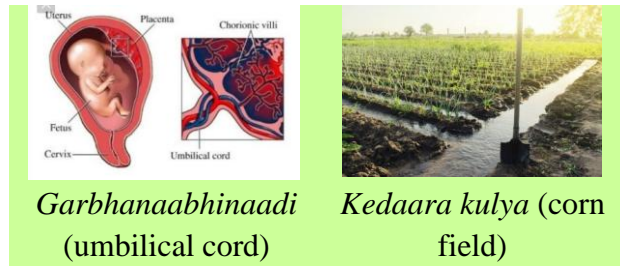
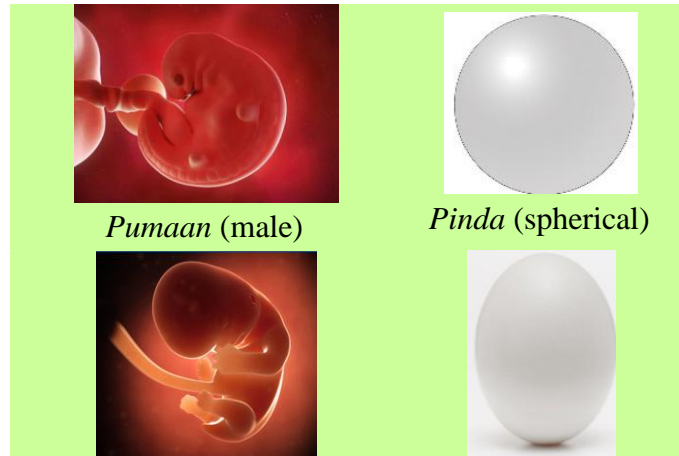


Fig. 6: upamaana for shukradharaa kalaa

Second Month of Embryological Development

In the second month of embryological development, the *Samhithakaara* says that the foetus (*garbha*) is of spherical or bolus shape if it is male, of *peshi* (elongated like muscle) if female and of *arbuda* (tumour) shape if *napumsaka* (*neuter*).¹²



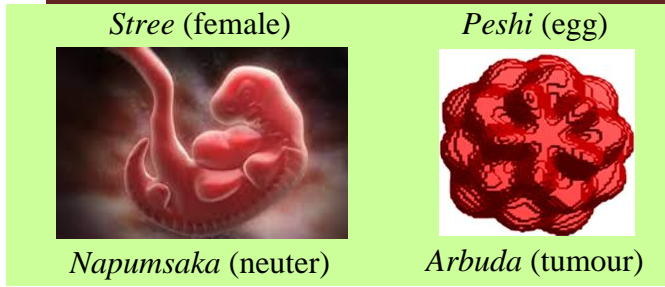


Fig. 7: upamaana for second month of embryological development

GARBHAAVAYAYA (APPEARANCE OF ORGANS OF FOETUS)¹³

Hands and feet of new-born are like the shape of tortoise (*kurmaakaara*).¹⁴



Fig. 8: upamaana for garbhaavayaya

DISCUSSION

An efficient tool for gaining knowledge based on an analogy or a comparison between two things which are different or alike is *Upamaana pramaana*. The base for observation is similarity or dissimilarity, which makes a less known or unknown element/feature recognisable with the help of any decipherable element/feature.

Analogy conveys the relevant facts for common understanding even when they speak less about the context to which they are referred.

Theory of analogy has a great importance in contemporary science too. It is seen that analogies are used to describe anatomical structures like kidney – purification tank, eye - camera, bronchi – primary tree branches, process of dilatation of cervix - blooming of flower, brain – complex sponge etc.¹⁵

To interpret the characteristic feature of *shudha shukra*, *shudha artava* and *Garbha*, Acharyas applied *upamana*, that means started to compare the structure with familiar things. This comparison facilitates us to understand the characteristic features of each structure in *Garbha shaareera* more easily and quickly. They considered these are the diagnosing tools in olden days for eg: if *artava* is similar as that of *gunja phala varna*, *indragopa varna* and *laksha rasa varna*, then *Shuddha artava* can be considered, if it is not then it has to be thought again.

In *Samhita*, the word ‘*raktha*’ can be seen in many places. It is one of the synonyms for *artava* too. In such situations the clarity of understanding is depends upon the context and *yukti*. To illustrate certain situation in *Ayurveda*, analogies are used.

CONCLUSION

Analogies may help students or people in developing a better understanding of tangled areas of anatomy. *Upamaana pramaana* or analogies helps to develop imagination or comparison. *Upamaana* holds good for all the *Trividha Sishya Buddhi* (various levels of intelligence/memory of students). The knowledge of these has made understanding *Rachana shaareera* an easy process.

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