GUDA VARTI FOR POST-OPERATIVE PAIN MANAGEMENT- ROAD LESS TRAVELLED

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ABSTRACT

Acute pain is an unpleasant sensory, emotional and mental sensation (experience) associated with vegetative signs, psychological response and changes in behavior. Post-operative pain is one such example and adequate management becomes utmost necessary. In Shalya tantra practice, procotology is the field of excellence for many practitioners and post-operative pain is an acquaintance difficult to handle. Many practitioners still resort to using contemporary I.M OR I.V analgesics for pain management which have proven ADR’S due to lack of availability of Ayurvedic analgesics for management. Vartis (suppositories) was in vogue since pre-historic times and have been mentioned in almost all Ayurvedic texts for various disorders with suitable formulations and various modes of insertion, e.g: Ratadi varti for Shoola. Ayurveda also has a wide-range of drugs mentioned for relieving pain which have not been used to the full potential. Hence Guda varti as a drug delivery system for pain management needs to be explored in Ayurveda Shalya tantra practice.

KEYWORDS: Guda varti, Suppository, Post-operative pain.

INTRODUCTION

The goal for post-operative pain management is to reduce or eliminate pain and discomfort with minimum side effects[¹]. According to the ‘American society of anesthesiologist practice guidelines for acute pain management in peri-operative setting’, acute pain is defined as pain present in surgical patient because of pre-existing disease, the surgical procedure or a combination of disease related and procedure related sources. [²]

The effective management of such pain becomes a hurdle for many Ayurvedic practitioners. In the field of Shalya tantra as procotology being the main field of excellence, the lack of available potent analgesics to relieve pain locally after surgery results in practitioners using contemporary I.M or I.V analgesics or diclofenac suppositories which have been proven to be highly Nephrotoxic[³] and hepatotoxic[⁴]. Vartis which have been in vogue since the pre-historic times needs to be explored as a better alternative to provide analgesia in Ayurveda.

Vartis and Suppositories

Nirukti- Vartayateeti Vartihi[⁵]

Definition- Vartiriva svarupatvata Vartiham namma prakritisstah.[⁶]

Medicines are powdered, triturated and given the Varti shape i.e., like the wick of a lamp and that is why it is called as Varti Kalpana. Varti resembles Vati in all respects like preparation etc, but differs in shape and mode of administration. Eg: Guda varti–medicines are made into Yavakriti[⁷].

Varti Kalpana has been mentioned in various texts like Sharangdhara, (14th AD) Yogaratnakara (16th AD) Bhavaprakash (16th AD) Bhaishajya ratnavali (20th AD) and many more.

Vartis are used for local administration through the following routes viz. Guda (Anus), Yoni (Vagina), Sishna (Penis), and Netra (Eye) and based on the route of drug administration, the length and diameter of the Varti will be modified.

Types of Vartis[⁸]

1) Depending on size: Guda varti (Angushtha pramaṇa) (Pushpanetrvat), Dhumavarti (Yavakara) etc.
2) Depending upon the indication at particular site: Guda Varti, Yoni Varti, Vrana Varti, Sishna Varti, Dhuma Varti, Netra Varti.
3) Depending on composition: Phala varti–madanaphala as main ingredient
4) Depending upon the action: Soumya– for Snehana poshana and Roopana karma and Teekshana for Virechana and Lekhana karma.
**Guda varti (rectal suppositories)**

Are inserted in the anal route and hence called *Guda Vartis*. They aid in *Vata (Apana vayu)* Anulomana and expulsion of Mala. They are indicated in Udavarta, Adhmana and Shola.

When used, the Varti is first soaked in Ghrita and then is inserted in the rectum slowly.

Eg: *Phala Varti*

**General method of preparation** [8]

Usually, two methods are employed here,

- **Paka method**: Jaggery/sugar along with water boiled together over a mild fire until *Paka* of 2 to 3 thread consistency. Later the fine powder of medicinal drugs is added little by little and stirred well to attain a homogenous mixture and desired sized *Varti* are prepared.

- **Bhavana method**: Fine powder of the medicinal drugs is mixed together and triturated along with the liquid media mentioned in the preparation. Later desired sized *Varti* are prepared.

**Suppositories**

The term suppositories have its origin in Latin and means, "to place under". Suppositories are a medicated solid dosage form intended for insertion into the body orifices. Suppositories and creams are the two main modes of administration of drugs through the rectum. They are used to deliver both systemically acting and locally-acting medications.

The general principle is that the suppository is inserted as a solid, and dissolve or melt inside the body to deliver the medicine pseudo received by the body to deliver the medicine pseudo received by the rectal mucus is more capable of tolerating various drug related irritations than the gastric mucosa, [9]

**Physiology of rectal absorption**

The veins of the rectum comprise the superior hemorrhoidal vein, which drains into the inferior mesenteric and portal system, and the middle and inferior hemorrhoidal veins, which enter the systemic venous circulation via the internal iliac veins. However, the inferior and middle hemorrhoidal veins bypass the liver and do not undergo first pass metabolism. Therefore, the drugs delivered through suppositories to the lower and middle hemorrhoidal veins are absorbed rapidly and effectively. The rectum is an interesting area for drug absorption because it is not buffered and has a neutral pH. It also has a very little enzymatic activity; thus, enzymatic degradation does not occur. The rectal mucus is more capable of tolerating various drug related irritations than the gastric mucosa, [10]

**Factors affecting the absorption**

- Rectal gut-wall metabolism and metabolism by micro-organisms in the rectal lumen may decrease bioavailability, [11]
- Biochemical composition of the drug inserted.

**Advantages of Rectal Route Administration** [11]

- No issues with oral abidance thus avoiding nausea and vomiting- Easily administered in unconscious patients.
- The achievement of a rapid systemic effect by giving a drug in a suitable solution (as an alternative to parental administration).
- Drug absorption may be easily discontinued in the event of an accidental overdose.
- The rate of drug absorption is not influenced by ingestion of food or the rate of gastric emptying
- First-pass elimination of high clearance drugs may be partly avoided.
- Contact with digestive fluids of the upper gastrointestinal tract is avoided, thereby preventing breakdown of some drugs.

**Disadvantages of Rectal Route Administration** [11]

- Interruption of absorption by defecation, which may occur particularly with irritant drugs.
• The surface area of the rectum is far smaller for absorption than that of the duodenum.
• The fluid contents of the rectum are much smaller than those of the duodenum and this may produce problems with dissolution of some drugs -patient acceptability may be a problem.

DISCUSSION
• Concept of Vartis has been widely discussed in the Ayurvedic treatises of Charaka Samhita, Sushruta Samhita, Bhaishajya Kalpana, Sharangdhara and many more which helps us understand the importance and efficacy of rectal route of administration of drugs.
• Bhaishajya ratnavali widely contributes different Guda Vartis in different diseases like Udavarta, Atisara and Arshas. Chakradatta also explains in detail about Guda Vartis for the treatment of Shula, Arshas and Udavarta showing the diversity of diseases in which it was being utilized.
• Acharayas also give a detailed method of preparation and sizing of the Vartis for different routes of administration according to the disease intended to cure. Eg: Pippalyadi guda varti- used in Udara vikara, Adhmana.
• Contemporary science too has mentioned the importance of suppositories and developed formulations in close synchronization with the Varti Kalpana.
• The contemporary science works on post-operative pain by administration of analgesics and NSAIDS which is proven to be harmful and have varied recorded ADR’s.
• Ayurveda is the repository of drugs which are known to cure almost every illness and more, even so mentions different formulations of the same drugs to suit the patient without harming the efficacy of the drugs.
• Extensive research and study are further required to enhance the understanding about management of pain through Varti in Ayurveda.

CONCLUSION
• Keeping in mind all the factors aiding in the bio-availability of the drug efficacy and ease of administration more formulations can be converted into Varti to achieve the desired therapeutic effects.

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