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REVIEW ON CONCEPT OF BANDHA (BANDAGING)

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ABSTRACT:

In Ayurveda Dhanwantri Sampradaya recognized as surgical branch, susruta compiled a surgical compendia including other branches of medicine known as "susruta samhita" he has been known as father of Indian surgery, teaching principle told by him are laid down in such a manner is unparalleled even today also, he has contributed a special chapter for new learners to extend short hand surgical training named "yogya sutriya adhyaya" this review study focuses on concept of Bandha(bandaging)techniques with suitable objects which is part of yogya sutriya. Bandha vidhi is technique in which vrana is covered with thick kavalika kept on wound. It helps to keep the wound clean and provide support in fracture and dislocation of bone.

Keyword: Bandha, Ayurveda, Bandhana Dravya, Bheda.

Introduction:

Bandaging the wound is termed as Bandha, purpose of bandaging¹ is *Vrana Shodana* (keeps wound Clean), *Vrana Ropana* (promote wound Healing), *Asthi-Sandhi Sthairyakaram* (immobilization of bone and Joints), Main types² - *Gada, Sama, Sheetla*, based on site is told 14 in Number³.

Acharya Sustruta has very rightly designed about concept and technique, and materials for bandaging and dressing purpose and told to learn surgical technique on objects before practicing similar technique on human beings he also emphasized on bandaging and changing of the bandages

and types of bandage as per the site of affected part in order to attain successful management of *Vrana*, /Fractures/Dislocation, otherwise leads to complications.

Material and Methods:

Bandana Dravya (materials for bandaging)⁴:

Kshouma (flax), *Karpasa* (cotton), *Avika* (Sheepwool), *Dukala* (fine silk), *Kousheya* (woven silk),

<i>Bandha</i>⁶	<i>Sthaana</i>	<i>Dosha</i>
<i>Gaadha</i>	<i>Sphik, Kukshi, Kakshaa, Vankshana, Uru, Shira</i>	<i>Kaphavaata dominance</i>
<i>Shithila</i>	<i>Netra, Sandhi</i>	<i>Pittarakta dominance</i>
<i>Sama</i>	<i>Shaakhaa, Vadana, Karna, Medhra, Mushka, Prishtha, Paarshva, Udara, Ura</i>	<i>Vaatapitta and Kaphapitta dominance.</i>

china patata (chinese cloth), *charma* (leather), *Antarvalkala* (inner bark of plant), *Alabushakal* (skin of gourd), *Latha - Vidhala* (tape made in creepers or bamboo strips), *tulaphala*, *Rajuu* (rope made from munja grass), *santhanika* (thick rope), *louha* (metals).

Advantages: dressing is used to protect wound, prevent infection, also to allow healing of wound.

Contraindication of bandage⁵:

Pitta-kapha dusta, traumatic, poisonous & with oedema associated with burning sensation, suppuration, redness/pricking type of pain, burn by caustics, cautery and sloughs, lepromatous ulcer, diabetic carbuncle, excessive granulation, wound caused by rat bite.

Classification:

Gaadha bandha: the bandage which presses the body part but prevents pain is called as *gaadha bandha*. *Shithila bandha*: the bandage which allows easy respiration and mobility and which is loose is called as *shithila bandha*. *Sama bandha*: the bandage which is neither secure like *Gaadha bandha* and nor loose like *Shithila bandha* is called as *samabandha*

*Acharya sushruta*⁷ mentioned about the 14 types of bandha and *acharya charka*⁸ mentioned 15 types, mentioned *utsangi extra bandha*. *kosha bandha* (figure1), *Dama bandha* (figure2), *Swasthika bandha* *acharya charka*⁸ mentioned 15 types mentioned *utsangi extra bandha*. *koshabandha* (figure1), *Damabandha* (figure1), *Dama bandha* (figure2), *Swasthika bandha* (figure3), *Anuvellitaka bandha* (figure4), *Pratolibandha* (figure5), *Mandala bandha* (figure6), *Sthagikaa bandha* (figure7), *Yamaka bandha* (figure8), *Katavaabandha* (figure9), *Chenna bandha* (figure10), *Vibandha bandha* (figure11), *Vitaana bandha* (figure 12) *Gophanaabandha* figure(13), *Panchaangee bandha* (figure14), *Utsanga bandha* (figure15)

Fig.1 KOSHA



Fig. 2 DHAMA

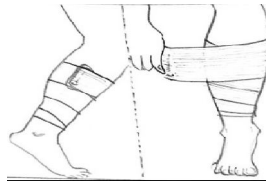


Fig. 3 SWASTHIKA



Fig. 4 ANUVELLITA

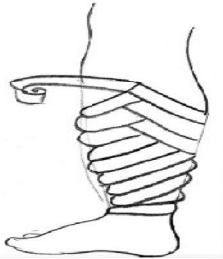


Fig. 5 MUTOLI

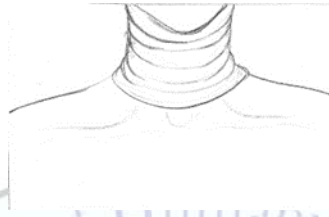


Fig. 6 MANDALA



Fig. 7 STHAGIKA



Fig. 8 YAMAKA

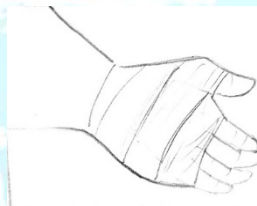


Fig. 9 KATVA



Fig. 10 CHEENA

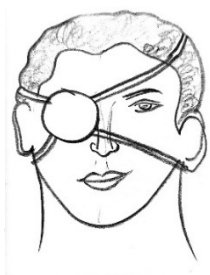


Fig.11 VIBHANDHA



Fig. 12 VITHANA



Fig. 13 GOPHANA

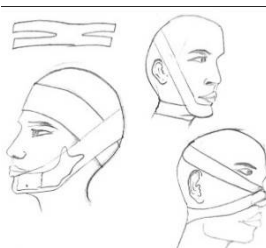


Fig. 14 PANCHANGI



Fig. 15 UTSSANGI

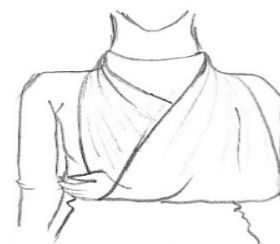


Fig. 16 Simple spiral bandage

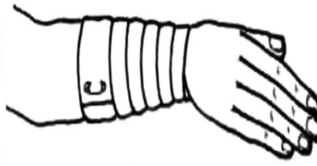


Fig.17 Reverse spiral Bandage

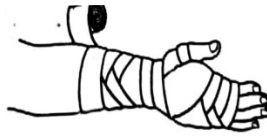


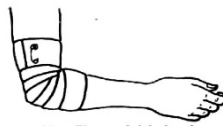
Fig. 18 Spica Bandage



Fig. 19 Triangular



Fig. 20 Figure of eight Bandage



Sl no	Bandha	Sthana	Correlation
	<i>Kosa</i>	<i>Angushta</i> and <i>Anguliparva</i>	Sheath
	<i>Dama</i>	<i>Sambaadhaanga</i>	Four tailed
	<i>Swasthika</i>	<i>Sandhi, Koorcha, Bhroo, Stanaantara, Hasta Tala, pada tala, karan, az</i>	
	<i>Anuvellitaka</i>	<i>S'haaka</i>	Spiral bandage
	<i>Pratoli</i>	<i>Greeva and Medra</i>	Loosely woven bandage like net
	<i>Mandala Bandha</i>	<i>To Vrutta Anga</i>	
	<i>Sthagikaa Bandha</i>	<i>Agra Bhaaga of Angusht`a, Angulee and Medra</i>	
	<i>Yamaka Bandha</i>	<i>In Presence of two Vrana</i>	Bandage for two wounds
	<i>KatvaaBandha</i>	<i>Hanu, shanka , ghanda pradesh</i>	Four tailed bandage
	<i>CheenaBandha</i>	<i>ApaangaPradesha</i>	Many tailed bandage for eye
	<i>VibandhaBandha</i>	<i>Prushta, Udara and UrahPradesha</i>	Many tailed bandage
	<i>Vitaana Bandha</i>	<i>Moordha pradesh</i>	Cephalic bandage

	<i>GophanaaBandha</i>	<i>Chibuka, Naasa, Osht`a, Amsa and Basti Pradesha</i>	GophanaaBandha
	<i>Panchaangee Bandha</i>	<i>Oordhvajatru</i>	Five tailed bandage
	<i>Utsanga Bandha</i>	<i>Baahu Pradesha</i>	Sling bandage

General steps to successful bandage⁹:

- Bandage the part in the position of greatest comfort to the patient. Support the part adequately before starting to apply the bandage
- Hold tightly rolled bandage with the head of bandage on top and wrap the tail around the body part without unrolling more than a few centimeters at a time
- Begin with a locking turn to hold the start of the bandage securely under each following turn
- Work from the middle of the body or limb in an outward direction
- Work from narrowest part below the dressing and work upwards
- Ensure that each turn covers 2/3rd of the previous one
- Cover totally any dressing and padding used finish with straight turn at the end of the bandage secure bandage with safety knot.

Holding bandage: to be held in left hand & applied evenly without any fold & tie gently.

Position of knot: to be either above/below/side of the wound

Bandha should be changed on the third day after Shastra karma , after that it should be changed considering the following points.

Bandha according to rittu¹⁰

Bandha should be changed after	Ritu / Month	Dosha
Two day	<i>Hemanta, Shishira, Vasanta</i>	--
One day	<i>Sharada, Greeshma, Varshaa</i>	--
Twice a day	<i>Sharada, Greeshma, Varshaa</i>	<i>Pitta dominance, Rakta dominance</i>
One day	<i>Vaishaakha</i>	--
Twice a day	<i>Vaishaakha, Greeshma</i>	<i>Pitta dominance</i>
One day	<i>Hemanta, Vasanta</i>	<i>Vaata Pitta dominance</i>

One day	--	<i>Pitta</i> dominance
One day	<i>Hemanta, Vasanta</i>	<i>Pitta Kapha</i> dominance
Morning once	<i>Sharada, Greeshma</i>	--
Evening once	<i>Varshaa</i>	--

Benefit¹¹

- Prevents excessive mobilization at the site of wound
- Stops bleeding
- Prevents wound from trauma
- Prevents wound from *maakshika*(flies)

Sequelae of imperfectly tight bandage: if tight bandage applied instead of *Sama/shithila* pack becomes ineffective & cause edema & pain if loose in place of *Gada/sama*- pack & paste may fall off and rubbing of margin of wound may occur due to friction from bandage.

Squeal of not applying bandage: wound contaminated by flies, mosquitoes, grass, stone, dust. According to modern bandaging is the process of covering of wound/ injured parts.

Material use: cotton, gauze, pad, adhesive plasters.

Types of Bandage:

- Triangular bandage
- Roller bandage
- T bandage

Roller bandage apply in four method

- Simple spiral bandage (fig. 16)
- Reverse spiral bandage (fig.17)
- Figure of eight bandage (fig. 18)
- The spica bandage (fig.19)

Discussion:

In surgical conditions, as poor & improper bandaging may lead to serious post operative complications despite of the proper surgery. Even during the ancient times, in view of *Acharya Susruta* thou, student has fully understood all the surgical principles /concept of bandaging but still he cannot compete unless been trained practically he will be told to conduct procedure in humans and is more particular about type of bandage to be used on specific part so that student can be conversant in the techniques and can solve the problem faced practically and can build up sound knowledge in surgical scholar and impart the same knowledge to trainees/learners. Bandaging plays

a very crucial role in the management *acharya Sushruta* clearly mentioned the do's and don'ts of bandaging. While the techniques of bandaging have remained the same since then, the material / the Dravya used for bandaging have evolved taking into consideration of the hygiene & its skin friendly nature. This in turn minimizes the post operative & non operative wound infections.

Conclusion:

Dressing is an important part in surgery, its importance is well documented in *Susruta samhita*, *Bandha* plays very important role in the healing of wound. *Bandha* technique told in ancient period the same concept followed in present era practice. *Bandha vidhi* should be done according to *sthana, dosha, ritu*. In emergency condition like haemorrhagic wound bleeding can be stop with compression bandage. when *Bandha* is done in improper way may lead to complication.

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