



Original Research

Standardization of Niruha Basti Retention with Reference to Height of Placing Enema-cane

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Abstract:

At present at most of the Ayurveda centers enema-cane is used to administer Niruha Basti wherein it is noted that generally it is retained for few minutes, though the prescribed maximum limit is 48 minutes in the texts. This may be the one of the reasons that the Basti therapy is not giving so much desired effects.

Generally while the administration of the Basti, the enema cane is placed on the hook of the stand arbitrarily. It is the fact that speed of emptying of the Basti content depends upon the height of the cane at which it is placed i.e. the speed is increased with increase and decreased with decrease of the height of the cane, hence it is not uniform. As it is mentioned that the Niruha Basti should be administered in such a way so that its flow should neither be slow nor very fast. Therefore this study was carried out to standardize the height at which the retention time of the Basti is ideal.

The results of this study showed that the ideal height of keeping the enema-cane containing 350 ml of Basti material for the patient of Madhyama Koshtha is five feet. The patient at this height can retain Basti for 26.38 minutes with range of 22.97 minutes to 29.79 minutes. It is well within the prescribed maximum limit of 48 minutes wherein the contents of basti along with Mala should come out.

Keywords: standardize of enema-cane height, ideal retention time, Niruha Basti

INTRODUCTION:

Niruha Basti comprises of multiple drugs due to which it is attributed wide range of functions which depend upon its contents, therefore considered very beneficial from therapeutic point of view. It is Shodhana as well has therapeutic actions, therefore it is supposed that it must stay inside the colon for stipulated time for absorption of its contents and must come out within 48 minutes with Mala (harmful/waste matters). But in the present era it is observed that it comes out within few minutes, therefore may not be giving so much desired effects as anticipated in the texts.

In the earlier times Niruha Basti was given by Basti Yantra comprising of Putaka (recipient) attached to Netra (nozzle). After insertion of nozzle in anus the physician was pressing the Putaka by keeping between both hands and by applying uniform pressure so that the contents of the Basti are pushed inside the colon neither very slowly nor very fast. But nowadays due to non availability of Putaka is replaced by enema-cane. The enema-cane is hooked on a rod at some height so that the content of the Basti may automatically be Gomutra (cow's urine)-90 ml was prepared as per conventional method.

pushed into rectum. Because speed of the emptying of Basti content depends upon the height at which enema cane is kept, so it may influence the speed of the flow of the emptying and thus may affect retention time of the Basti also. Hence there is a need to find out the ideal height at which the enema-cane is to be placed.

AIM:

Standardization the height of placing the enema-cane containing Niruha Basti with reference to its retention time.

MATERIALS AND METHODS:

40 patients having Madhyama Koshtha (moderate bowel habit) undergoing Basti Karma were selected from Panchakarma department of SDM College of Ayurveda Hassan. The patients were of both the sexes between the age of 20 and 70 years.

Eranda-muladi Niruha Basti comprised of Eranda-muladi Kvatha-200 ml, Kalka-45 gm, Sahacharadi Taila-140 ml, honey-90 ml, Saindhava salt-10 g and

Before the administration the patients were prepared as per conventional method and thereafter 350 ml of Eranda-Mulaadi Basti was administered through enema

cane. The patients were divided randomly into five height groups each comprising of eight patients. The five heights at which enema-cane was 30 inches, 45 inches, 60 inches, 75 inches and 90 inches. The retention time of the Basti was measured in seconds with the help of a stop watch. A care was taken that all the conditions may remain same except the height at which cane was kept.

RESULTS:

Mean retention time at different heights of enema cane at which it was kept with percentage increase in respect to previous height is shown in Table-1 and statistical comparison is presented in Table-2. The range of retention time at each height was calculated with formula of 95% confidential limit and the results are presented in Table-3.

Table-1
Mean Retention times Recorded at Different Heights

Height in inches	Retention time in seconds	% increase compare to 30	% increase compare to 45	% increase compare to 60	% increase compare to 75
30	811.75	--	-	-	-
45	905.13	11.50	-	-	-
60	1582.75	94.98	74.86	-	-
75	1303.38	60.56	44.00	17.65	-
90	922.88	13.69	1.86	41.75	29.20

Table-2
Statically Comparison of Retention time at Different Height

Height	Retention time (second)	SD (±)	SE (±)	t compare to 30	t compare to 45	t compare to 60	t compare to 75
30	811.75	255.21	96.46	--	--	--	--
45	905.13	175.41	66.30	0.798	---	--	--
60	1582.75	276.09	104.35	5.430	5.48	--	--
75	1303.38	302.46	114.32	3.287	3.02	1.804	---
90	922.88	200.63	75..83	0.917	0.176	5.116	2.774

Table-3
95% confidential limits of Retention time at Different Heights

Height	Retention time in seconds	95% confidential limit n seconds
30	811.75	627.94 to 1006.06
45	905.13	775.18 to 1035.08
60	1582.75	1378.22 to 1787.28
75	1303.38	1079.31 to 1527.45
90	922.88	774.25 to 1071.51

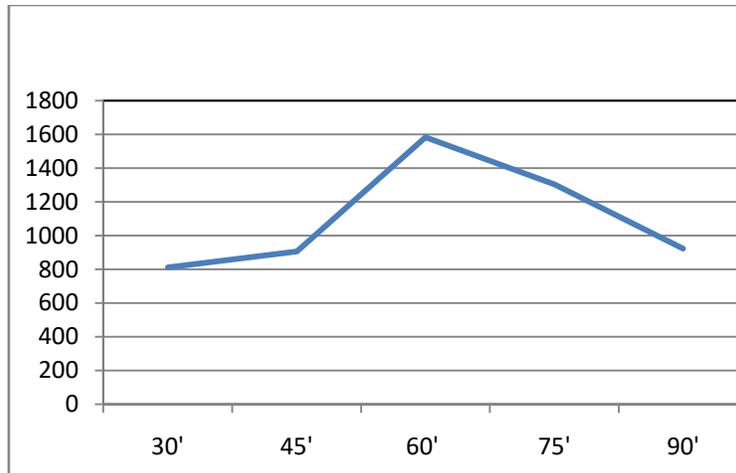


Figure
Showing Retention Time at Different heights of the Enema Cane

DISCUSSION

In this study enema-cane containing 350 ml of Niruha Basti material was kept at five heights viz. 30 inches, 45 inches, 60 inches, 75 inches and 90 inches. It was administered to the patients having Madhyama Koshta and the corresponding retention time of the Basti by the patients of each group was recorded.

30 inches Height: At this height the mean retention time was 811.75 seconds with range of 627.94 to 1006.06 seconds (Table-3).

45 inches Height: At this height the mean retention time was 905.13 seconds with range of 775.18 to 1035.08 (Table-3).

60 inches Height: At this height the mean retention time was 1582.75 seconds with range of 1378.22 to 1787.28 seconds (Table-3).

75 inches Height: At this height the mean retention time was 1303.38 seconds with range of 90 seconds (Table-3).

90 inches Height: At this height the mean retention time was 922.88 seconds with range of 774.25 to 1071.51 seconds (Table-3).

Increase in Retention Time in Comparison to 30' Height: Comparison showed that with change of height from 30 inch to 45 inch the retention time insignificantly increased by 11.50%, but at the height of 60 inch it highly significantly increased by 94.98%. Further increase in the height to 75 inches, the increase in retention time decreased but still it was 60.56% in comparison to 30' height, but further increase to 90 inch the increase declined by 13.69% (Table-1 and 2).

Increase in Retention Time in Comparison to 45' Height: Statistical analysis showed that increasing the

height from 45 to 60' caused significant increase of 74.86%, but further increase in height to 75 inch there was insignificant decrease of 17.65% in retention time. When the height was 90' retention the time significantly decreased by 29.20% (Table-1 and 2)

On the basis of the foregoing it can be concluded that by increasing the height from 30 inches to 45 inches, there was little increase in the retention time but at the height of 60 inches it become maximum. Thereafter, increase in the height lead to decline in retention time, which at the height of 90' became equal to the height of 45 inches (Figure-1).

Thus at the height of 60 inches maximum retention time was found in comparison to all the other heights of the enema-cane.

It is well known fact that at the lower height speed is less whiles it is comparatively more on higher points. Ayurveda says that Putaka (recipient) should be pressed by the physician such a way so that the flow of the contents should neither be very slow nor very fast, that is at moderate rate. The results of this study also showed that ideal height is sixty inches where maximum retention time was noted. At the height of 30 and 45 inches the flow rate was lower and at 75 and 90 inches it was comparatively higher, therefore retention times were also less in comparison to moderate height of 60 inches. Thus the ideal height is 60 inches (5 feet). On the basis of the foregoing it may be concluded that ideal height for getting maximum retention time i.e. 1582.75 (26.38 minutes) seconds with range of 1378.22 (22.97 minutes) to 1787.28 (29.79 minutes) seconds (Table-3).

The maximum limit of retention time for Niruha Basti is one Mahurata i.e. 48 minutes and the ideal retention time calculated in this study i.e. 26.38 minutes is well within that limit.

CONCLUSION:

Ideal height of keeping the enema-cane having 350 ml of Basti content is five feet

At the height of five feet, the patient of Madhyama Koshta can retain Basti for 26.38 minutes with range of 22.97 minutes to 29.79 minutes.

It is well within the prescribed maximum limit of 48 minutes wherein the contents of basti along with Mala should come out.

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