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A COMPARATIVE CLINICAL STUDY OF ANUTAILA NASYA AND BRIHAT DASHAMOOLA TAILA NASYA IN THE MANAGEMENT OF ARDHAVABEDHAKA W.S.R. MIGRANE

Dr G.S.Rakesh¹, Dr V S Kanthi²

1. MD Scholar, Department of Panchakarma, Bhagawan Mahaveer Jain Ayurvedic Medical College and PG Centre, Gajendragad
2. Professor & HOD, Department of Panchakarma, Bhagawan Mahaveer Jain Ayurvedic Medical College and PG Centre, Gajendragad

ABSTRACT:

Migraine is a highly prevalent disorder worldwide; it is the 3rd most prevalent and 7th leading cause of disabling headaches. The most sensitive criterion for migraine is headache worsening with activity. Vascular theory of brain held that migraine symptoms were a function of hyperemia and ischemia. *Acharya* Sushruta has mentioned 11 types of *Shiro Roga* (Diseases of head); one of them is *Ardhavabhedaka* in which paroxysmal unilateral headache associated with vertigo and pain of varying intensity is seen. This can be correlated with Migraine in modern context. *Urdhvajatrugata Rogas* (Diseases of supraclavicular region) and their management have a special place in *Ayurveda*. In *Ayurveda* Nasya Therapy is considered as master key for all *urdhvajatrugata* vikaras. Hence *Anutaila Nasya & Brihat Dashamoola Taila Nasya* has been selected from *Astanga Hridaya & Bhaisajya Ratnavali*. The main Objective of this study was to compare the efficacy of *Anutaila Nasya & Brihat Dashamoola Taila Nasya* in the management of *Ardhavabhedaka*. Total 30 patents of *Ardhavabhedaka* were selected and divided into Group A and Group B 15 patients each. Group A patients were administered with *Anutaila nasya* and Group B patients were administered with *Brihat Dashamoola Taila nasya* for 7 days and repeated for 3 cycles with 7 days gap. To assess the results Grading Severity of Pain, Duration of pain and Frequency of attacks were fixed. After comparison the both the therapy it is concluded that the Group-B (*Brihat Dashamoola Taila Nasya*) showed better result than Group-A (*Anutaila Nasya*)

Key Words: Migraine, *Anutaila Nasya*, *Brihat Dashamoola Taila Nasya*, *Ardhavabhedaka*

INTRODUCTION:

Migraine is a highly prevalent disorder worldwide; it is the 3rd most prevalent and 7th leading cause of disabling headaches¹. The most sensitive criterion for migraine is headache worsening with activity. Vascular theory of brain held that migraine symptoms were a function of hyperemia and ischemia. Pain appears to be related to desensitization of peripheral perivascular nerve terminals, possibly a consequence of distended meningeal blood vessels leading to activation and sensitization of the central trigeminal system¹. Prevalence of Migraine in India is 16-20%.² Acharya Sushruta has mentioned 11 types of *Shiro Roga* (Diseases of head)³; one of them is *Ardhavabhedaka* in which paroxysmal unilateral headache associated with vertigo and pain of varying intensity is seen.⁴ This can be correlated with Migraine in modern context. *Urdhvajatrugata Rogas* (Diseases of supraclavicular region) and their management have a special place in *Ayurveda*. *Shirah (Head)* being the prime seat of knowledge and also the prime controller of the entire body has been termed as *Uttamanga* (superlative organ)⁵. Hence, the diseases occurring in the *Urdhvajatru* have been very clearly highlighted in the *Ayurvedic* classics along with their management. The modern drugs are not acceptable due to their drawbacks - drug dependence, drug withdrawal syndrome, relapse of headache within hours and chances of getting chronic headache.⁶ In Ayurveda Nasya Therapy is considered as master key for all urdhvajatrugata vikaras.

Hence *Anutaila Nasya*⁷ & *Brihat Dashamoola Taila Nasya*⁸ has been selected from Astanga Hridaya & Bhaisajya Ratnavali.

The ingredients in *Anutaila & Brihat Dashamoola Taila* are having the properties that are vata shamaka and kaphagna, which are the main doshas getting involved in the pathogenesis of ardhavabhedaka.

So, an attempt has been made to assess the efficacy of *Anutaila & Brihat Dashamoola Taila Nasya* in the management of *Ardhavabhedaka* w.s.r. to migraine.

AIMS AND OBJECTIVES

1. To study the etiopathogenesis of Ardhavabhedaka & Migraine from Ayurvedic and modern point of view.
2. To assess the efficacy of *Anutaila Nasya* in the management of Ardhavabhedaka.
3. To assess the efficacy of *Brihat Dashamoola Taila Nasya* in the management of Ardhavabhedaka.
4. To compare the efficacy of *Anutaila Nasya & Brihat Dashamoola Taila Nasya* in the management of Ardhavabhedaka.

MATERIALS AND METHODS:

SOURCE OF DATA:

Literary source: All classical, modern literature and contemporary texts including the journals and website about the disease, dravyas and procedures were reviewed and documented for the study.

Clinical source: Patients were randomly selected from OPD and IPD of Bhagawan Mahaveer Jain Ayurvedic Medical College, Hospital & PG Centre Gajendragad and Special Medical camps and other referrals.

Drug source: The dravyas were collected from the local market after proper identification and the all the required tailas were prepared in department of Rasashasrta & Bhaishajya Kalpana of Bhagawan Mahaveer Jain Ayurvedic Medical College, Hospital & PG Centre Gajendragad.

METHODS OF COLLECTION OF DATA:

Study design

It is a comparative clinical study with pre-test and post-test design, where in 30 patients of either sex, diagnosed as *Ardhavabhedaka*, were randomly assigned into two groups, Group A and Group B, each comprising minimum of 15 patients.

A detailed proforma was prepared incorporating Ayurvedic and modern points of *Ardhavabhedaka* (Migraine). An assessment was made on change in clinical feature before and after treatment. The scoring was given to each symptom ranging from 0 - 4.

Diagnostic Criteria Inclusion criteria

1. Patient aged between 16 and 60 yrs.
2. Clinical features as mentioned in our classics and modern texts.
3. Patients irrespective of the chronicity were taken up for the study.

Exclusion Criteria

1. Patients suffering from sinusitis, hypertension, and fever, secondary headache caused by meningitis, tumor, encephalitis, cervical spondylitis and refractive errors; also patients using any other systemic drugs which may alter the results of the study were excluded.

Posology

| | Group A | Group B |
|--------------------------------|--|--|
| Drug | Anutaila Nasya | Brihat Dashamoola Taila Nasya |
| Nasya Dose Duration | 8 drops in each nostril Nasya was given once daily for continue seven days. This was repeated thrice with interval of seven days in between. | 8 drops in each nostril Nasya was given once daily for continue seven days. This was repeated thrice with interval of seven days in between. |
| Follow up | 2 months | 2 months |

ASSESSMENT CRITERIA

Assessment was based on the following parameters

Subjective Parameter

- i. Intensity of pain assessed using visual analogue scale.
- ii. Duration of pain.
- iii. Frequency of attacks.

Grading of Symptoms

| Symptom | | Grade |
|----------------------------|---------------------------------|----------|
| Severity of Pain | No pain | 0 |
| | Pain tolerable | 1 |
| | Do not disturb the routine work | 2 |
| | Disturbs the routine work | 3 |
| | Intolerable pain | 4 |
| Duration of pain | No pain | 0 |
| | 1 min – 3 hours | 1 |
| | 4 – 12 hours | 2 |
| | 13-24 hours | 3 |
| | Over 24 hours or continuous | 4 |
| Frequency of attack | No attack | 0 |
| | Once in 21-30days | 1 |
| | Once in 11-20days | 2 |
| | Once in 1-10days | 3 |
| | Continuous/daily | 4 |

Associated symptoms

| | |
|--------------------------|----------------|
| Nausea | Present |
| | Absent |
| Vomiting | Present |
| | Absent |
| Photophobia | Present |
| | Absent |
| Vertigo | Present |
| | Absent |
| Tinnitus | Present |
| | Absent |
| Aura | Present |
| | Absent |
| Phonophobia | Present |
| | Absent |
| Numbness | Present |
| | Absent |
| Heaviness | Present |
| | Absent |
| Tenderness | Present |
| | Absent |
| Diarrhea | Present |
| | Absent |
| Confusional state | Present |
| | Absent |

TEST OF SIGNIFICANCE

The collected data was analyzed by using paired and unpaired t – test at 5% level of significance under expert supervision.

Table Showing result on Severity of Pain

| Group | Mean | | | Relief % | S.D. | S.E. | t | P |
|-------|------|------|-------|----------|------|------|------|--------|
| | BT | AT | BT-AT | | | | | |
| A | 2.13 | 0.93 | 1.20 | 62 | 0.41 | 0.11 | 11.2 | <0.001 |
| B | 2.00 | 0.60 | 1.40 | 72 | 0.50 | 0.13 | 10.6 | <0.001 |

Severity of Pain: Mean score of Severity of Pain before treatment was 2.13 which was reduced to 0.93 in group-A, and in group-B the mean score before treatment was 2.00 which was reduced to 0.60. 62% & 72% relief was observed in complaint of Severity of Pain in group A & B respectively, which was statistically highly significant at the level of $p < 0.01$. **Table**

Showing result on Duration of pain

| Group | Mean | | | Relief % | S.D. | S.E. | t | P |
|-------|------|------|-------|----------|------|------|------|--------|
| | BT | AT | BT-AT | | | | | |
| A | 1.80 | 0.80 | 1.00 | 64 | 0.38 | 0.10 | 10.2 | <0.001 |
| B | 1.53 | 0.53 | 1.00 | 71 | 0.53 | 0.13 | 7.2 | <0.001 |

Duration of pain: Mean score of duration of pain before treatment was 1.80 which was reduced to 0.80 in group-A, and in group-B the mean score before treatment was 1.53 which was reduced to 0.53. 64% & 71% relief was observed in complaint of duration of pain in group A & B respectively, which was statistically highly significant at the level of $p < 0.01$

Table Showing result on Frequency of attack

| Group | Mean | | | Relief % | S.D. | S.E. | t | P |
|-------|------|------|-------|----------|------|------|------|--------|
| | BT | AT | BT-AT | | | | | |
| A | 2.13 | 0.73 | 1.40 | 69 | 0.51 | 0.13 | 10.6 | <0.001 |
| B | 2.26 | 0.66 | 1.60 | 73 | 0.50 | 0.13 | 12.2 | <0.001 |

Frequency of attack: Mean score of frequency of attack before treatment was 2.13 which was reduced to 0.73 in group-A, and in group-B the mean score before treatment was 2.26 which was reduced to 0.66.

69% & 73% relief was observed in complaint of frequency of attack in group A & B respectively, which was statistically highly significant at the level of $p < 0.01$.

Table Showing Overall result of therapy on group A

| Sl. No. | Sum of grades of all symptoms | | BT (%) | AT (%) | Net Response (%) | Remark |
|---------|-------------------------------|----|--------|--------|------------------|--------|
| | BT | AT | | | | |
| 1 | 5 | 2 | 100 | 40 | 60 | MR |
| 2 | 8 | 5 | 100 | 63 | 38 | LR |
| 3 | 6 | 3 | 100 | 50 | 50 | MR |
| 4 | 4 | 1 | 100 | 25 | 75 | MR |
| 5 | 6 | 2 | 100 | 33 | 67 | MR |
| 6 | 10 | 5 | 100 | 50 | 50 | MR |
| 7 | 6 | 2 | 100 | 33 | 67 | MR |
| 8 | 5 | 2 | 100 | 40 | 60 | MR |
| 9 | 8 | 5 | 100 | 63 | 38 | LR |
| 10 | 6 | 3 | 100 | 50 | 50 | MR |
| 11 | 6 | 2 | 100 | 33 | 67 | MR |
| 12 | 5 | 2 | 100 | 40 | 60 | MR |
| 13 | 4 | 0 | 100 | 0 | 100 | Cured |
| 14 | 6 | 2 | 100 | 33 | 67 | MR |
| 15 | 6 | 1 | 100 | 17 | 83 | GR |

Graph Showing Overall result of therapy on group A

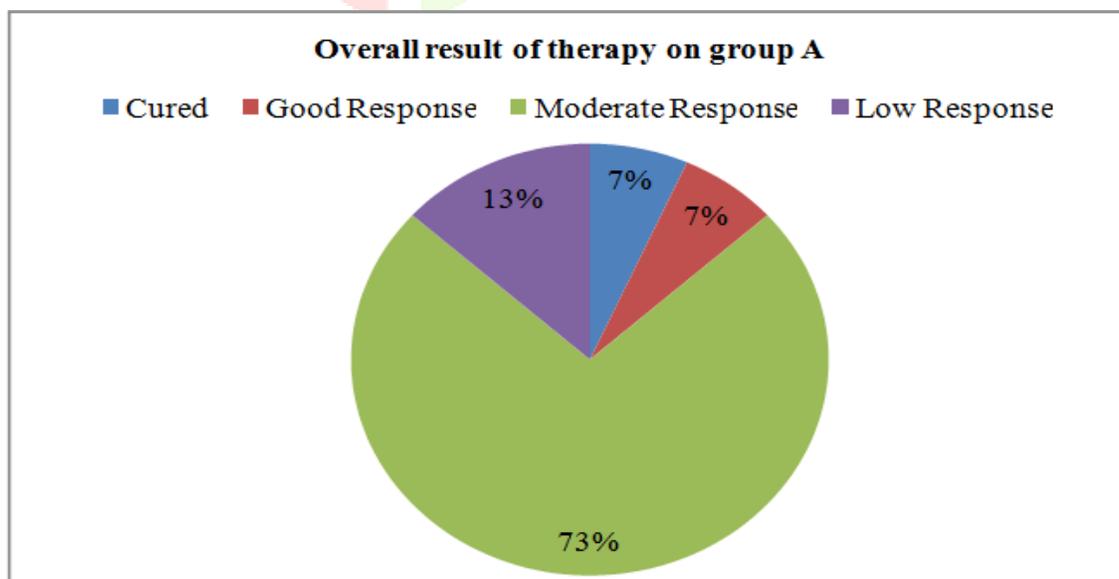
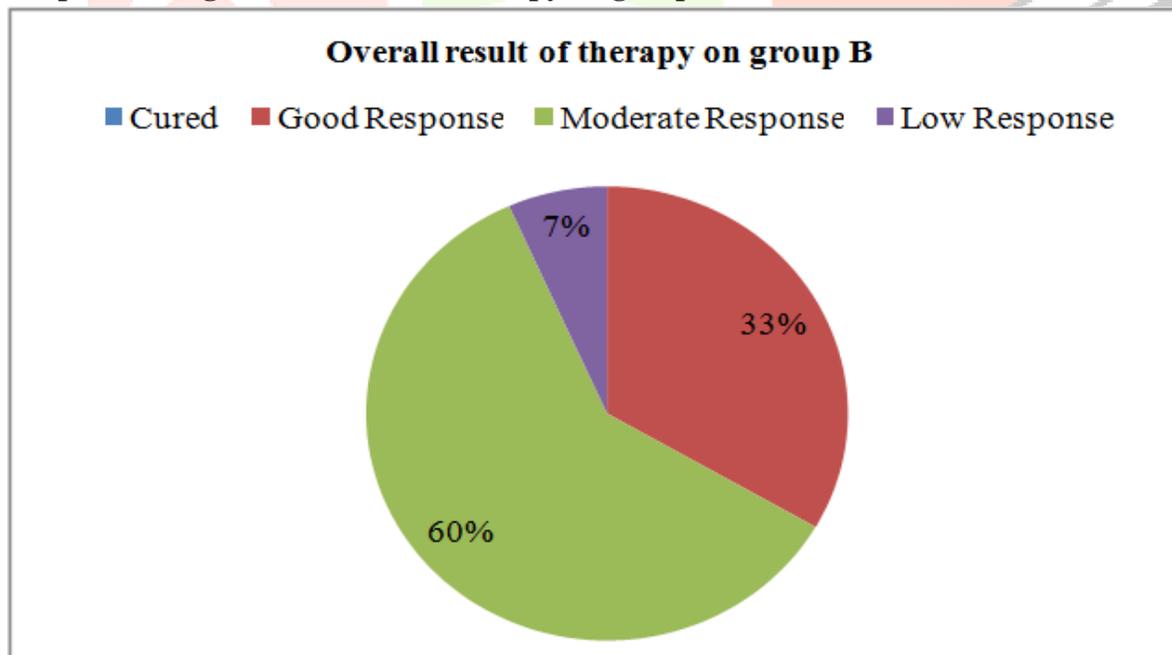


Table Showing Overall result of therapy on group B

| Sl. No. | Sum of Grades of all symptoms | | BT (%) | AT (%) | Net Response (%) | Remark |
|---------|-------------------------------|----|--------|--------|------------------|--------|
| | BT | AT | | | | |
| 1 | 4 | 1 | 100 | 25 | 75 | GR |
| 2 | 9 | 3 | 100 | 33 | 67 | MR |
| 3 | 7 | 2 | 100 | 29 | 71 | MR |
| 4 | 4 | 1 | 100 | 25 | 75 | MR |
| 5 | 6 | 1 | 100 | 17 | 83 | GR |
| 6 | 5 | 1 | 100 | 20 | 80 | GR |
| 7 | 9 | 3 | 100 | 33 | 67 | MR |
| 8 | 6 | 2 | 100 | 33 | 67 | MR |
| 9 | 6 | 3 | 100 | 50 | 50 | MR |
| 10 | 6 | 1 | 100 | 17 | 83 | GR |
| 11 | 5 | 3 | 100 | 60 | 40 | LR |
| 12 | 4 | 1 | 100 | 25 | 75 | MR |
| 13 | 6 | 2 | 100 | 33 | 67 | MR |
| 14 | 5 | 2 | 100 | 40 | 60 | MR |
| 15 | 5 | 1 | 100 | 20 | 80 | GR |

Graph Showing Overall result of therapy on group B

Cured: 1 patient got cured in group-A & no patients got cured in group-B **Good Response:** 1 patient was gained good response in group-A and 5 patients gained good response in group-B.

Moderate Response: Moderate Response was seen in 11 patients in group-A and in 9 patients in group-B

Low Response: 2 patients showed low response in group-A and 1 patient showed low response in group-A

DISCUSSION

Probable mode of action of Nasya Karma in Ardhavabhedaka:

In Ayurvedic texts, the mode of action of Nasya Karma is explained in directly. According to Charaka Samhit, the drug administered through the nose enters the Uttamanga and eliminates the morbid doshas residing there (Ch. Si. 2/22).

□ According to Astanga Samgraha, drug administered through the nose, the doorway to the Shiras, reaches the Shringataka Marma of head, which is the Sira Marma, formed by the Sira of nose, eye, Kanta, and Shrota. The drug spreads by the same route. Scratches the morbid doshas of Urdhwajatrata and extracts them from the Uttamanga (A.S. 29/2)

□ Indu, the commentator of Astanga Samgraha, opined that Shringataka is the inner side of middle part of head i.e. 'Shira Antar Madhyam'.

□ In the context Acharya Sushruta had opined that Shringataka Marma is the Sira Marma formed by the union of Siras supplying the nose, eye, tongue. Thus we can say that drug administered through Nasya may enter the above Sira and purifies them. (Su. Sha. 6/27). Under the compilation of Nasya Karma, excessive elimination of Errine may cause Mastulunga Srava (flow of cerebrospinal fluid out to the nose) (Su. Chi. 40/40), which suggests the direct relation of nasal pathway to the brain.

All the ancient Acharyas have said considered Nasa as the gateway of Shiras.

It is experimentally proven fact that any variation takes place in any part of the body, the located blood circulates is always increased; this is because of natural protection of the body. When Vikruti occurs, the provocation of doshas takes place in Shiras, due to the irritating effect of the administered drug, resulting in the increase in blood circulation of brain, so extra accumulated morbid doshas are expelled out from small blood vessels and ultimately these doshas are thrown out by the nasal discharge, tears, and by salivation.

Absorption and transportation of the drug administered by nasal pathway:

□ Keeping the head in lowering position and retention of medicine in nasopharynx help in providing sufficient time for local drug absorption.

□ Any liquid soluble substance has greater chance for passive absorption through the cell of lining membrane.

□ The drug absorption can also be enhanced by massage and local fomentation.

The absorption of drug, promoted by massage and Nasya Karma can occur in two ways:

- 1) By systemic circulation
- 2) Direct pooling into the intra cranial region.

The second way is more interesting:

1. By vascular path
2. By lymphatic path.

Importance of Post Nasya Massage:

□ Post Nasya massage on the frontal, temporal, maxillary, mastoid, and manya region may help to subside the irritation of the somatic constriction due to heat stimulation.

□ It may also help in removing slush created in the region.

□ According to Acharya Sushruta, many is the existing in neck on either side of trachea (Su. Sha. 6/29), which lively corresponds to the carotid spines of neck on the bifurcation of common carotid artery. The repeters called Baro repeaters are satuated here and manipulation on it may have a buffering action on cerebral arterial pressure.

□ On the bases of the fact we can understand that procedures postals and comducts explained for nasya karma have a great importance in drug absorption and transportation

□ Thus it can be understood that there is a definite effect of nasyakarma on the diseases f nervous system, endocrine system and in psychiatric disturbances.

□ In this way procedure of nasya is beneficial in various diseases for maintenance of healthy conditions too.

Probable mode of action of Anutaila Nasya

AnuTaila is Vataghna, Bruhanaand Snehan. Due to *Sukshama-Vyavayi Guna* and special preparatory process, *Anutaila* possess a good spreading capacity through minute channels. *Tikta- Katu Rasa, Laghu-Tikshna Guna, Ushna Veerya* and *Katu- Vipaka* make *Srotoshodakatwa. Indriyadardhyakaratawa, Balya, Preenana* and *Brimhana* properties can increase general and local immunity. *Madhura Rasa, Sheeta Veerya, Snigdha Guna* and *Tridosahara* properties will promote the nourishment of *Dhatu* which ultimately increases the general and local immunity (mucosal health). Copious Discharges occur after administration of Anutaila Nasya. Chest, head, pallet and throat is attacked with Kapha Dosha. Anutaila firstly mobilizes the Kaphadidoshas from these Sthanas and then it acts there as Bruhana. Oil reaches to tiny channels and eradicates all the dosha. The Sneha reaches in the Srotasas, Oleation and firming action takes place on tendons and ligaments of upper part of the body. Thus, it is helpful in wray-neck, facial palsy, immobilisation of jawline, headache, rhinitis, migraine and shuddering of neck. It increases the efficiency of Indriya e.g. Nasa, Karna, Netra. Disease of the upper part of the body remains no more recurrent with the consistent use of AnuTaila. According to Charaka Acharya regular use of AnuTaila softens the Dosha, extracts them from the site without destructing it and eventually improves effectiveness of Indriya. This is because of oleation action on Sira

Probable mode of action of Brihat Dashmoola Taila Nasya:

Action at Doshic level:

The *Snigdha Guna, Guru Guna, Madhura Vipaka, Madhura Rasa, Lavana Rasa* and *Ushna Virya* present in *Brihat Dashamoola Taila* pacify the *Vata Dosha*.

Ruksha Guna, Kashaya Rasa, Madhura Rasa and *Tikta Rasa, Madhura Vipaka* and *Sheeta Virya* pacify the *Pitta Dosha*.

Laghu Guna), Tikshna Guna, Ruksha Guna, Katu Rasa, Tikta Rasa, Kashaya Rasa, Katu Vipaka and *Ushna Virya* pacify the *Kapha Dosha*.

Action at Panchabhautika level:

Vayu and *Agni Mahabhoota* are present maximum in *Brihat Dasahmoola Taila*. *Vayu* due to its *Chalatva* works as a media in *Urdhavaga Pravriti* and its *Laghutava* enhances the function of *Agni Mahabhoota*. Thus *Deepana – Pachana Karma* is also seen at *Bhautika* level.

Jala Mahabhoota has *Kledana* and *Bandhana Karma*, which acts as a binding agent and *Akasha Mahabhoota* provides proper space for the process.

Prithvi Mahabhoota is having *Sanghataka* and *Adhogamana Karma*. Hence it takes back the already expelled morbid *Doshas* with an aim to remove them from the micro-channels.

Most of the contents in *Brihat Dashmoola Taila* are having *Shothahara, Vedanasthapana, Deepana, Pachana* and *Tridosha Shamaka Karma*.

CONCLUSION

- In Group A – 7% patients had completely cured, 7% patients had good response, 73% moderate response and 13% patients had low response (improvement less than 25%)
- In Group B – 33% patients showed good response, 60% moderate response and 7% patients had low response (improvement less than 25%)
- Both the drugs showed the good results in the management of the disease Ardhavabhedak.
- After comparison the both the therapy we may conclude that the Group-B (*Brihat Dashamoola Taila Nasya*) showed better result than Group-A (*Anutaila Nasya*)

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