

A COMPARATIVE STUDY OF KATI BASTI AND MATRA BASTI OF NIRGUNDI TAIL ON GHRUDHRASI

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Key Words :- Ghrudhrasi, Nirgundi Taila, Katibasti, Matrabasti

INTRODUCTION

In this lightening fast era, several disharmonies are created in biological system of man due to his changing life style. There are few factors which creates undue pressure on spinal cord and produced low back pain. In busy professional and social life. Improper sitting posture in clinics, offices and factories continuous and over exertion, food habitat, altered sleep pattern and jerking movements during sports and travelling likewise progressing disorder affecting the hip joint, pelvis and nearby structures are also participating in this condition. In this way working population is being affected by low back pain and difficulty in walking.

In modernization children and youth of a community are also as affected as old people. All above stated factors are responsible for vitiation of Vata Dosha resulting into vatic diseases.

In Charak samhita, Acharya describes variety of Vata Vyadhi and divided into two groups ie samanyaja and Nanatmaja¹ Among these 80 nanatmaja Vyadhi, Gridhrasi² is describes as Snayugat VataVyadhi, which is having vitiation of Vata Dosha and most of the time vitiation of the Vata-Kapha Dosha, and this anubandh starts from Gridhrasi nadi (Sciatica nerve). According to Charaka, Ruka(Pain), Toda(Pricking Sensation), Stambha (Stiffness), Spandan(Twitching) are the major sign and symptoms located at Kati (Waist), Uru (Thighs), Janu (Knee), Jangha (Calf) And Paada (Foot) in order. And most of the times these sign and symptoms presents along with Tandra(Drowsyness),

Gaurav (Heaviness) , Aruchi (Anorexia), Karmahani (Loss Of Function) which are signs of Kaphanubandha² .

Sciatica, modern terminology also has same sign and symptoms and site of origin of disease. Gridhrasi can be correlated with it. In Ayurvedic literature, line of

treatment of Gridhrasi elaborated such as Snehan, Swedan, Vaman, Virechan, Basti, Shirodhara, Agnikarma and Siravedha, among these prime treatment of Vata is called Basti³; also called as ardh chikitsa ⁴ Among all the treatment, there is need to find out such a treatment for Gridhrasi. In present study, an attempt was made to treat patient with kati basti and matra basti of Nirgundi Taila for relief.

Nirgundi is one of the most multitalented plant and having anti-inflammatory, CNS depressant, anti-arthritis, analgesic properties. Nirgundi is proven very effective in Vata Vyadhi and also described in Charak samhita.

AIM - To compare the effect of kati basti and matra basti of Nirgundi Taila in Gridhrasi.

OBJECTIVES -

1. To determine the efficacy of Nirgundi Taila in Gridhrasi.
2. To determine the efficacy of kati basti of Nirgundi Taila in Gridhrasi.
3. To determine the efficacy of matra basti of Nirgundi Taila in Gridhrasi.
4. To compare the efficacy of kati basti and matra basti of Nirgundi Taila in Gridhrasi.

MATERIALS AND METHODS

SELECTION OF PATIENTS- 60 Patients were randomly selected, 30 patients in each group from Panchakarma OPD and I.P.D. Of hospital our institute, irrespective of sex, religion, occupation, marital status etc.

Materials used for Group A (Kati Basti):

Taila- Nirgundi Taila

Yantra- Acrylic Kati Basti yantra of 4'' shortest diameter and

9'' longest diameter, 2.5'' height with 16'' circumference.

Pishti- Wheat and Masha powder (for pasting yantra), water

Measuring Flask of 500ml

Induction Heater, big water vessel - for indirect heating of Taila.

Bowls, cotton, big spoon.

Materials used for Group B (Matra Basti):

Basti Dravya- Nirgundi Taila

Sthanik abhyang- Tila Taila

Sthanik sweda- by Nadi swedan yantra with Plain water – Basti Yantra- 100ml

glycerin syringe

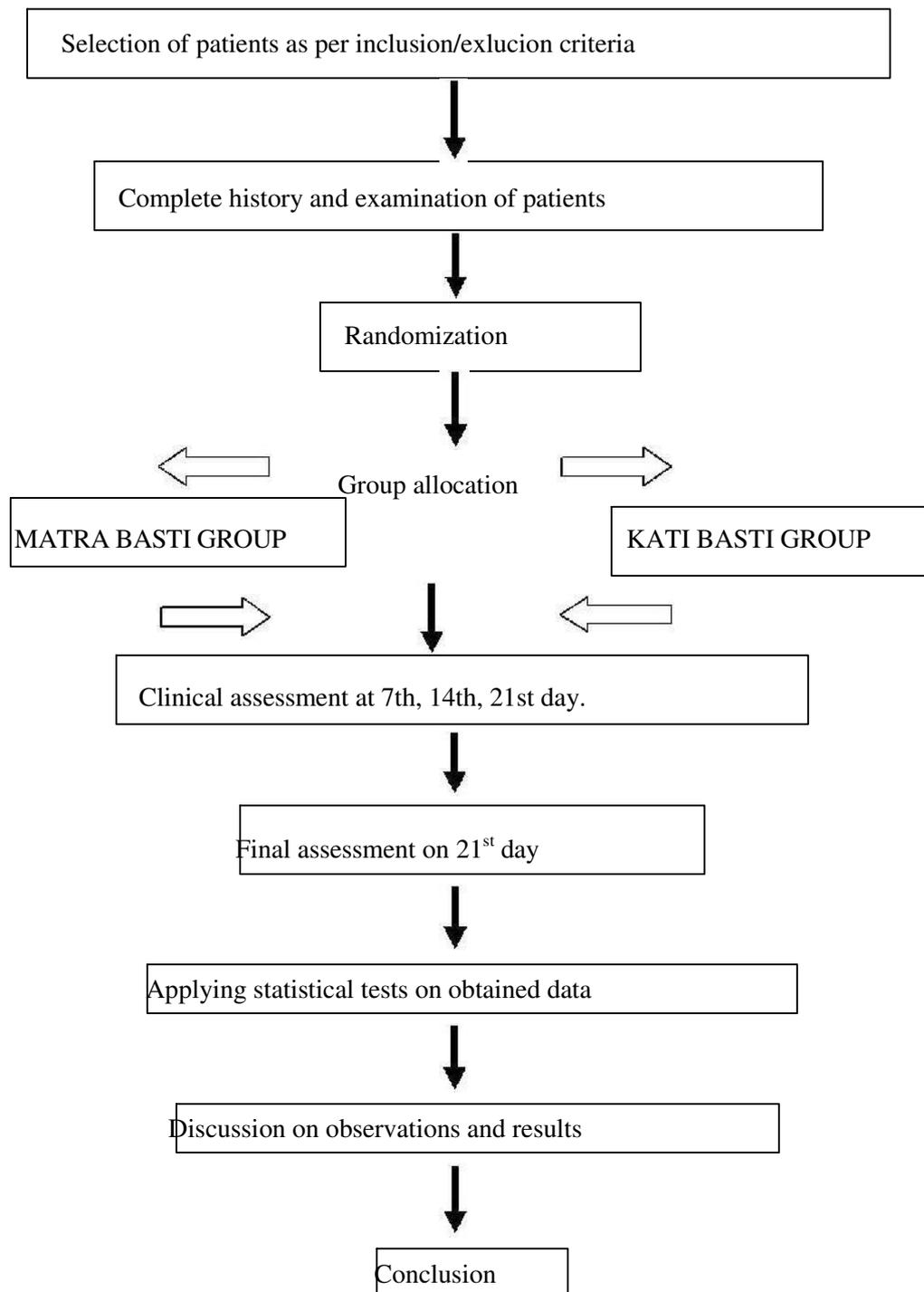
Catheter- Simple rubber catheter no. 8,9,10(as applicable) – Pair of gloves, cotton swabs, bowl

Induction Heater, big water vessel - for indirect heating of Taila.

DRUG: Nirgundi Taila⁵ was prepared by taking granthokta quantity of all ingredient at Pharmacy of our college. Authentication and standardization of oil done.

Tila Taila was used of given murchhana sanskar at pharmacy of our college for sthanik abhyanga.

METHODS: STUDY FLOW CHART



Total 60 patients were divided into two groups. The detailed clinical history was taken and examination was done as per special case proforma prepared for this purpose.

Matra Basti⁶ Group - In this group 30 patients were treated with Matra Basti⁷ of Nirgundi Taila for 7 days.

Kati Basti⁸ Group - In this group 30 patients were treated with Kati basti of Nirgundi Taila after sthanik abhyang and sthanik nadi sweda for 7 days.

INCLUSION CRITERIA -

1. Age Group - 30-60 year
2. Sex- Male And Female
3. The patient suffering from Gridhrasi Lakshana like Ruk, Toda, Stambha, And Spandan A In Sphik, Kati, Jangha, Janu, Pada.
4. Foot Flexion Test + ve
5. Knee Jerk and Ankle Jerk.
6. Straight Leg Rising test + ve
7. Tenderness long course of Sciatica nerve.

EXCLUSION CRITERIA -

1. Cancer of Spine
2. Fibrositis of sacral ligament
3. Tumors of cauda equina.
4. Pregnant women.
5. Patient suffering from complication like Diabetes Mellitus .
T.B. spine.

SUBJECTIVE PARAMETERS-

1. Ruka (pain)
2. Toda (pricking sensation)
3. Stambha (stiffness)
4. Spandana (twitching)
5. Aruchi (anorexia)
6. Tandra (drowsyness)
7. Gaurava (heaviness)
8. Karmahani (loss of movements)

OBJECTIVE PARAMETER

1. S.L.R. test⁹
2. Joint reflex

INVESTIGATIONS- 1. X- Ray - Lumbo- sacral Spine (AP and LT View), 2. CBC, 3. BSL , 4. ESR were done accordingly prior to the treatment in few of the undiagnosed patients only.

PATHYA-APATHYA

In both the groups, no special diet was recommended. Patients were kept on their routine diet in home and in routine hospital light diet when they got admitted. Patients were advised to avoid ucchharbhashyam, rathashobham, atichankraman, atyasana, ajirnadhishana, vishamahitashan, divasvapana and vyavay Also patients were advised to use hot water for drinking and bathing.

CRITERIA FOR ASSESSMENT AND RESULT-

Patients were assessed on the basis of subjective and objective parameters. They were given scoring pattern depending upon their severity.

1. Ruka (Pain) -

No pain - 0 ,Mild pain(occasional) - 1 Moderate pain - 2 ,Severe pain – 3

2. Toda (Pricking sensation) -

No pricking sensation - 0 ,Mild pricking sensation - 1 ,Moderate pricking sensation–2 Severe pricking sensation - 3

3. Stambha (Stiffness) -

No Stambha - 0 , Lasting 5 - 10 minutes – 1, Lasting 10 - 30 minutes 2

Lasting > 30 - 60 minutes - 3

4. Spandana (Twitching) -

No spandana - 0 ,Mild spandana - 1 ,Moderate spandana – 2, Severe spandana - 3

5. Aruchi (Anorexia) -

No aruchi - 0 ,Mild Aruchi (occasionally present) - 1 ,Moderate Aruchi (for all foods, could take meal) -2 ,Severe Aruchi (for all foods, could take meal)- 3

6. Tandra (Drowsiness) -

No tandra - 0 ,Mild Tandra (occasionally) - 1 ,Moderate Tandra (for few hours in a day) - 2 Severe Tandra (throughout the day) - 3

7. Karmahani (Loss Of Movement) -

No Karmahani - 0

Mild Karmahani (occasional difficult in walking) - 1 Modrerate

Karmahani (difficulty in walking) - 2 Severe Karmahani (unable to walk) - 3

8. Gaurava (Heaviness) -

No heaviness - 0, Mild heaviness (occasional 5-10min.) - 1

Moderate heaviness (daily 10-30 min.) - 2 , Severe heaviness (daily for more than 1 hour - 3

9 . S.L.R. Test -

More than 90⁰ - 0 ,61⁰ - 89⁰ - 1 ,31⁰ -60⁰ - 2 ,Under 30⁰ - 3

10. Joint reflexes -

Normal - 0 ,Diminished - 1 ,Exaggrated - 2 ,Absent - 3

First assessment was done before starting the treatment.

FOLLOW UP- Both groups were examined time to time for expected results. 1st Follow up:- on 7th day (i.e. on last day of procedure)

2nd Follow up:- on 14th day (one week after 1st follow up)

Duration of the Study- 14 days.

Assessment of clinical result-

The total result of the therapy was assessed as below:

Result	% relief in signs & symptoms
Cured	100 % relief
Marked Improvement	more than 50 % relief
Improvement	25 - 50 %
Unchanged	upto 25 % relief

OBSERVATIONS AND RESULTS

Efficacy of the Matra Basti and Kati Basti treatment for each of the assessment criteria was assessed by subjecting the pre & post treatment data for the patients from Trial group to Wilcoxon Paired Signed-Rank Test. Statistical Test for Effectiveness Testing: Wilcoxon Paired Signed Rank Test. This test was carried separately for each of the assessment criteria.

- **Efficacy For Testing Ruk**

We observed that P-Values for MatraBasti and Kati Basti are less than 0.05 hence we conclude that effect observed in both groups are significant. Further we can observe that effect observed in MatraBasti is 76.2% and Kati Basti is 66.7%.

- **Efficacy For Testing Stambha**

We observed that P-Values for MatraBasti and Kati Basti are less than 0.05 hence we conclude that effect observed in both groups are significant. Further we can observe that effect observed in MatraBasti is 72.5% and Kati Basti is 65.5%.

- **Efficacy For Testing Toda**

We observed that P-Values for MatraBasti and Kati Basti are less than 0.05 hence we conclude that effect observed in both groups are significant. Further we can observe that effect observed in MatraBasti is 75% and Kati Basti is 72.9%.

- **Efficacy For Testing Spandana**

We observed that P-Values for MatraBasti and Kati Basti are less than 0.05 hence we

conclude that effect observed in both groups are significant. Further we can observe that effect observed in MatraBasti is 70.9% and Kati Basti is 66.1%.

- Efficacy For Testing Gaurava

We observed that P-Values for MatraBasti and Kati Basti are less than 0.05 hence we conclude that effect observed in both groups are significant. Further we can observe that effect observed in MatraBasti is 60.9% and Kati Basti is 65.4%.

- Efficacy For Testing Tandra

We observed that P-Values for MatraBasti and Kati Basti are less than 0.05 hence we conclude that effect observed in both groups are significant. Further we can observe that effect observed in MatraBasti is 66.7% and Kati Basti is 66.7%.

- Efficacy For Testing Aruchi

We observed that P-Values for MatraBasti and Kati Basti are less than 0.05 hence we conclude that effect observed in both groups are significant. Further we can observe that effect observed in MatraBasti is 69.6% and Kati Basti is 66.7%.

- Efficacy For Testing Karmahani

We observed that P-Values for MatraBasti and Kati Basti are less than 0.05 hence we conclude that effect observed in both groups are significant. Further we can observe that effect observed in MatraBasti is 76.2% and Kati Basti is 66.7%.

- Efficacy For Testing SLR TEST

We observed that P-Values for MatraBasti and Kati Basti are less than 0.05 hence we conclude that effect observed in both groups are significant. Further we can observe that effect observed in MatraBasti is 64.3% and Kati Basti is 64.4%.

- Efficacy For Testing Joint Reflexes

We observed that P-Values for MatraBasti and Kati Basti are less than 0.05 hence we conclude that effect observed in both groups are significant. Further we can observe that effect observed in MatraBasti is 72.5% and Kati Basti is 65.5%.

OVERALL EFFECT – MATRA BASTI GROUP

Overall Effect	Frequency	MatraBasti
Unchanged	0	0.0
Mild Improvement	2	6.7
Moderate Improvement	6	20.0
Markedly Improvement	22	73.3

OVERALL EFFECT – KATI BASTI GROUP

Overall Effect	Frequency	Kati Basti
Unchanged	0	0.0
Mild Improvement	3	10.0
Moderate Improvement	8	26.7
Markedly Improvement	19	63.3

DISCUSSION

In present study two groups, each of 30 patients were randomly selected for the clinical trial. After fulfilling inclusion criteria treatment was given to both group. Matra Basti of Nirgundi Taila was given to 30 patient and Kati Basti of Nirgundi Taila was given to another 30 patients. Clinical data obtained from the study was statistically analyzed .

Ruk: After treatment relief found in patients for symptoms Ruk was 76.2% in matra basti group and 66.7 % in kati basti group. This shows that both the therapies had highly significant effect in reduction of the pain of Gridhrasi. Pain is due to Vata Prakopa and Taila has been considered as good Vata shamak. Contents in Nirgundi Talia has Vata-Kaphashamak and vedanasthapak properties which reduces the pain, more over pain gets pacified by allevation of Vata due to snehana effect and nourishment to dhatus.

Stambha: After treatment relief found in patients for symptoms

Stambha was 72.5 % in matra basti group and 65.5 % in kati basti group. The Nirgundi drug present in Taila has laghu, ruksha guna which acts as stambhahar and Ushana Virya of Taila might have provided relief in stambha symptom and shown stambhahara action in patients of Gridhrasi.

Toda: After treatment relief found in patients for symptoms

Toda was 75% in matra basti group and 72.9 % in kati basti group. Toda is also one of the important symptom produced by vitiation of Vata. Basti has been considered as prime treatment for Vata and more absorbtion of Taila in body through Matra Basti might have contributed in better relief thereby causing Vatanuloman. Therefore Matra Basti group has shown good improvement in this symptom by considering percentage relief.

Spandan: After treatment relief found in patients for symptoms Spandana was 70.9 % in matra basti group and 66.1 % in kati basti group. Relief provided in Matra Basti Group was better than Kati Basti Group, because Spandan occurs due to Vata and Nirgundi Taila used in both the groups has madhur, tikta rasa, snigdha guna which help in reduction of Vata thereby reducing spandan moreover Basti is said to be the best treatment for Vata. Matra Basti provides better internal oleation to the body which reduces Vata. So this might be one of the reason that the better relief was found in Matra Basti group compared to Kati Basti group.

Gaurav: After treatment relief found in patients for symptoms

Gaurav was 60.9 % in matra basti group and 65.4 % in kati basti group. This reflects that the potency of drugs and their Vata-Kapha shamak properties had provided better relief in Gaurav

Tandra: After treatment relief found in patients for symptoms

Tandra was 66.7 % in matra basti group and 66.7 % in kati basti group. This shows that due to effect of drug patients got better relief in Tandra.

Aruchi: After treatment relief found in patients for symptoms

Aruchi was 69.6 % in matra basti group and 66.7 % in kati basti group. This shows that there is better effect of drug on symptom Aruchi.

Karmahani : After treatment relief found in patients for

symptoms Karmahani was 76.2 % in matra basti group and 66.7 % in kati basti group. This is clear from the above discussion that both the therapies had highly significant effect in reducing the karmahani in Gridhrasi. Karmahani is due to Vata Prakopa and Taila has been considered as good Vata shamak. Contents in Nirgundi Talia has Vata-Kapha shamak and vedanasthapak properties which reduces the pain, more over pain gets pacified by allevation of Vata due to snehana effect and nourishment to dhatus.

SLR: After treatment relief found in patients for sign SLR TEST

was 64.3 % in matra basti group and 64.4 % in kati basti group. It shows that after Kati Basti, patients had improvement in lifting the leg to more height. Due to alleviation of Vata by kati basti symptoms like ruk and stambha got reduced significantly which resulted in the SLR improvement of the patients in kati basti group as compared to matrabasti group.

Joint reflexes : After treatment relief found in patients for sign

joint reflexes was 72.5 % in matra basti group and 65.5 % in kati basti group. Due to alleviation of Vata by matra basti and its snehana effect, ruk and stambha got relieved and because of this in joint reflexes patients shows more relief.

Total Score of % relief in signs and symptoms of matra basti

group was 70.5 % where as it was 66.6% in kati basti group. this shows that In present study, Matra Basti has shown more effect in relieving the signs and symptoms as compare to Kati Basti.

Discussion about overall effect:

Both groups showed significant reduction in symptoms as:

- Markedly Improvement was seen 74 % of patient in matra basti group where as 63.3 % was seen in kati basti group.
- Moderate improvement was seen 20 % patients of matra basti group where as it was 26.66 % in kati basti group.
- Mild improvement was 30% in matra basti group though it was 50% in kati basti group,
- No patient was seen with Unchanged in both of the groups.
- More improvement was seen in matra basti group as compare to kati basti group.

Hence Matra Basti has more effect in this study than Kati Basti in relieving the signs and symptoms of Gridhrasi. Matra Basti has anuloman karma because of that Vatanuloman occurs which alleviates the vitiated Vata and proper functioning of Vata is achieved.

PROBABLE MODE OF ACTION:

Probable mode of action of Nirgundi Taila matra basti:

In the present study, Nirgundi Taila was used for matra basti contains the ingredients which are having Vata-Kapha shamak, bruhan and vedanasthapak properties. Tila Taila, which is considered as the best Vata shamak has Sukshma, Vyavayi and Vikashi gunas. It is used as base of the drug and as a result of active principles the drug spreads

fastly all over the body even through minute strotas when administered as Basti. Other contents like Nirgundi which has sara guna along with remarkable stabhtahar property have ushana virya that pacifies Vata and relieves the symptoms like pain, stiffness etc. and in depletion of Vata Kaphaj Gridhrasi symptoms like gaurav and aruchi. Sushruta has stated that the actions of Basti are mainly due to Virya¹⁰. Dalhana again clarified virya of basti because of the Snehadi Gunas present in Basti dravya (Dalhana on S.Chi. 35: 26).

Probable mode of action of Nirgundi Taila kati basti

Due to rukshadi ahara-vihara vitiation of Vata occurs, the snigdha pradhana majja, medadi dhatus are not nourished well because of effected function of shleshaka Kapha. Asthipurana karma is disturbed and asthidhatu becomes sushira, durbala especially at sandhies of kati and sphik also vitiated Vata gets accumulated (sthansamshrya) in Kati Pradesh, which results in compression, irritation or inflammation of Gridhrasi Nadi resulting in Gridhrasi.

Hence the lakshanas like ruk, toda, stambha etc are produced. For the chikitsa of Asthi majjagat Vata Acharya Charak has favoured use of Bhaya and Abhyantar Snehan (C.Chi28/93). Kati Basti is also a type of Bahya Snehan in which sukhoshana Taila is retained on the kati Pradesh. Also, according to Modern Science absorption through skin can be enhanced by Suspending the drug in an oily vehicle (Goodman & Gilman). According to Acharaya Shushrut the Virya of the drug are absorbed into skin and then digested by Bhrajak Pitta¹¹. Virya of drug are absorbed through romakupa dhamni and circulated all over the body there by causing dhatu bruhan and vitiated dosha shaman at kati Pradesh.

Probable Mode of action of Nirgundi Taila Kati Basti:

Dalhana has mentions that when Snehana drug reaches to the particular dhatu, it subsides or cures the diseases of that particular dhatu. Acharya Sushruta has mentioned that Sneha used in Avagahana, through Shiramukha (Opening of the veins), Romakupa (root of the hairs) and Dhamani (Arteries) nourishes the body and thus provides strength (S.Chi.24/33). Same thing we can

understand for Kati Basti where sneha (Taila/oil) is retained over the Kati Pradesh. In Kati Basti sukoshana oil is used which generates penetrating heat and sustainable heat along with that the heat causes dilation of vessels present in skin because of which pressure on nerve releases and once dilation takes place oil penetrates, or active ingredients of oil enter into circulation, act as Vatahara. Vata shaman takes place because of snigdha guna and ushana virya of Nirgundi Taila and it also lubricates the parts in Kati Pradesh where snehan is required and reduces friction and Vata also.

CONCLUSION

- In this study none of the patients developed any untoward symptoms during the course which indicates the safety of procedures.
- ⌈ In this study both groups have significant reduction in signs and symptoms but Matra Basti has more effect than Kati Basti in relieving the sign and symptoms of Gridhrasi.
- ⌈ These results are purely on the basis of observations and statistical analysis.

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