

# A Comparative Study to Evaluate the Effectiveness of Thiosinaminum 3X in Dissolving LSCS Scar in Women

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## ABSTRACT

**Background:** In women, having an LSCS scar, is distressing and can damage a person's body image, self-esteem, identity, and social interactions. It was seen that homoeopathic medicines had positive effects on scar resolution but the scientific studies for showing its effectiveness are rarely found. This study is designed in order to evaluate the effectiveness of Thiosinaminum 3x in dissolving LSCS scar in women of Sangareddy.

**Objectives:** 1. To Assess the effectiveness of Thiosinaminum in dissolving LSCS Scar.  
2. To compare the effectiveness of Thiosinaminum 3X potency in women having the LSCS scar for a duration of 1 [Group-A] and 2 years [Group-B].

**Materials and methods:** The study was conducted among women having LSCS Scar for the duration of not more than 2 years from different areas of Sangareddy, out of which 30 patients were selected by simple random method. The women were advised to take Thiosinaminum 3x. Vancouver scar scale was used to assess the scar among these individuals.

**Results:** In assessing the Objective – 1, there was statistical difference found with the use of Thiosinaminum 3x in dissolving LSCS Scar in both the groups, thus accepting the alternate hypothesis. Whereas for Objective – 2, in comparing both the groups, 'P-value' of the test between the groups was more than 0.005 which shows that Thiosinaminum had shown its effect

under both the groups and there is not much variation in them. Irrespective of the duration of the scar, Thiosinaminum 3x had found to be effective in scar dissolution.

**Conclusion:** It was concluded from the study that Thiosinaminum 3x acts effectively in dissolving LSCS Scar as there was difference noted in the total scar score obtained before and after medication. Among the two groups selected for the study, there was no statistical difference found in the action of Thiosinaminum 3x. While in assessing the individual parameters of the scar scale, much difference was found in vascularity and pigmentation in Group A, whereas in pigmentation and pliability for Group B.

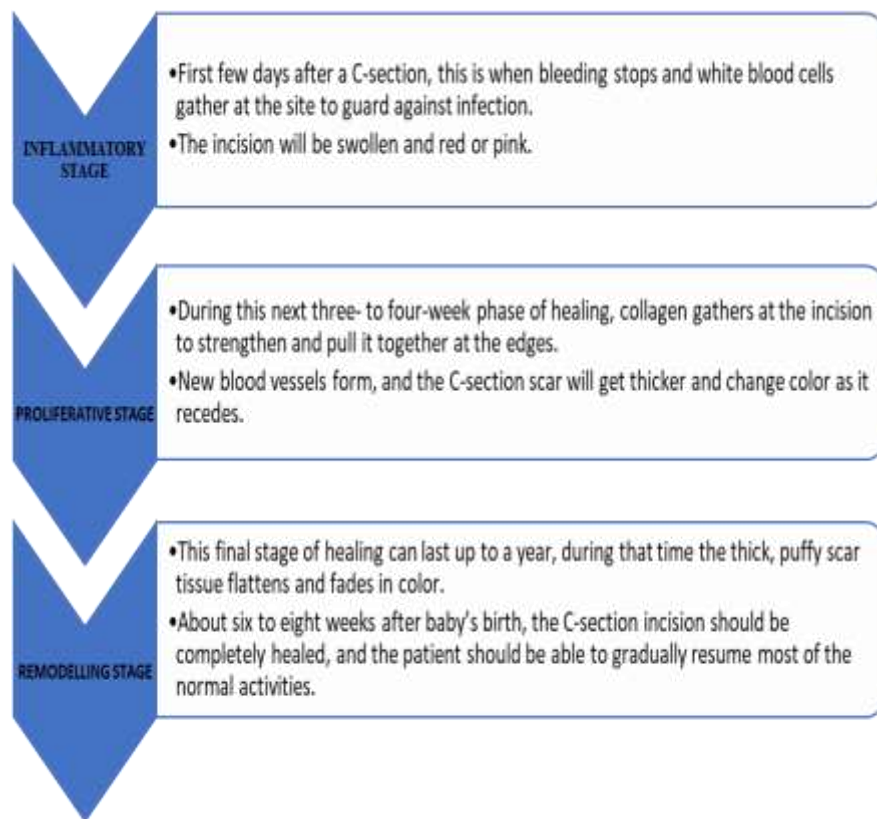
**Key words:** Vancouver Scar Scale, LSCS Scar, Thiosinaminum, Scar Assessment

## INTRODUCTION

Scarring is the process by which wounds are repaired. Scar is not just a change in skin color, but a structural change in the deeper layers of the skin which is perceived as an alteration in the architecture of the normal surface features <sup>[1]</sup>. Broad spectrum of scar types, ranges from a "normal" fine line to a variety of abnormal scars, including widespread scars, atrophic scars, scar contractures, hypertrophic scars, and keloid scars. The scar which is formed after surgical incision is a widespread scar and

the scar that is formed after transverse surgical incision is a hypertrophic scar<sup>[2]</sup>. In Cesarean section, usually there are two types of incisions that a surgeon may use i.e. vertical and horizontal. Both the incisions are equally likely to scar, but the scar will look different depending on its direction. Vertical cuts are more commonly preferred in emergency C-sections because they are faster. However, a vertical incision is considered more painful and takes longer to heal<sup>[3]</sup>. On the other hand, horizontal incisions are more commonly encountered in planned C-sections. These incisions are low on the torso, just above the pubic area. Many mothers prefer horizontal incisions

because they are easier to hide. They also heal more quickly and cause less pain when compared to vertical incisions. In some women, these scars become thick, raised, and red when the scar is hypertrophied or when there is keloid formation<sup>[4]</sup>. The Birth Injury Health Center explains the three C-section scar healing stages as follows:<sup>[5]</sup> Cesarean section is one of the most commonly undertaken operations worldwide, and its rate is constantly increasing in recent years both in middle and high income countries, despite several scientific societies developing informative campaigns to support vaginal delivery<sup>[6]</sup>.



Nowadays LSCS Scar has become one of the problems seeking condition where improper scar dissolving is leading to various complications like adhesions, endometriosis, morbid adherent placenta etc. A Cesarean section is a major surgery that can lead to significant scarring. Sometimes there are lot of complications seen especially in women with previous Cesarean delivery like Bleeding, Abnormal

separation of the placenta, Injury to the bladder or bowel, Infection in the uterus, wound infection, urinary tract infection, delayed return of bowel function, Blood clots etc..<sup>[7]</sup> Having a scar is distressing and can damage a person's body image, self-esteem, identity, and social interactions<sup>[8]</sup>. Surgical scars in women are tied to anxiety about appearance and sexuality and it is likely that a scar is not the only change a

women notices in her body after having a baby. Many women feel a societal pressure to return their body to the way it was before, or even to improve upon the way they looked before they were pregnant. Many fear that they will be seen differently in the eyes of others, such as their coworkers or significant others.

As per the literature available, it is seen that homoeopathic medicines had positive effects on scar resolution but the scientific studies for showing its effectiveness are rarely found. In a study conducted by Dr. Foubister, Homoeopathy and Scar Tissue, influence of certain potentized substances on scar tissue where he discusses his experience and the comments of stalwarts in such cases. In homoeopathic Materia medica, medicines like Graphites, Silicea, Nitric acid and so on are described for use in scar dissolution<sup>[9]</sup>. Dr. Clarke advised in The Prescriber, for the removal of cicatrices, Thiosinaminum 6-eighthourly; Phytolacca lx-eight-hourly; and for inflammation of cicatrix Fluoric acid 6 gtt2-eighthourly; for keloids Silica 3, gr.V-eight-hourly; and for Dupuytrens contraction, recent cases, Gelsemium-eight-hourly, chronic cases 3x gr viii-night and morning<sup>[10]</sup>.

In the literature of dissolving scars, usefulness of homoeopathic remedy Thiosinaminum is found, but nowhere the accuracy of it was studied in recent research activities<sup>[11]</sup>. 4 This study is an attempt to document the usefulness of homoeopathic treatment in LSCS scars. An increasing number of such cases will create an adequate database to enable a well-designed research study in specific areas.

#### **Objectives:**

- To Assess the effectiveness of Thiosinaminum in dissolving LSCS Scar.
- To Compare the effectiveness of Thiosinaminum 3X potency in women having the LSCS scar for a duration of 1 [Group A] and 2 years [Group B].

## **METHODOLOGY**

**Study Design and Sampling:** It is an interventional clinical study conducted in different areas of Sangareddy during February 2022 to July 2022. The drug for the study [Thiosinaminum] was procured from GMP certified pharmaceutical companies approved by the IEC. The drug was stored according to the rules of Indian Homoeopathic Pharmacopeia.

**Sample size-** Comprised of 57 patients, which included 28 patients with 1 year duration of LSCS Scar, and 29 patients with 2 years duration of LSCS Scar. 2 patients from 1 year group, and 4 patients from 2 years group, who were under puerperal period, or were having keloid, are excluded from the study. Rest 26 and 25 patients with 1 year and 2 year duration of LSCS Scar respectively, were advised for using Thiosinaminum 3x.

**Dosage-Administration** of daily 2 tablets of 3x attenuation twice a day i.e., morning and night after intake of food with a gap of 15 minutes. Finally, among 26 and 25 patients with 1 year and 2 year duration of LSCS Scar respectively, 15 patients from each group were selected by simple random sampling method. Assessment of the scar was done with “VANCOUVER SCAR SCALE”- Objective Assessment of the scar, an internationally accepted scale for assessing scars, during pre- and post-treatment, in every follow up, which was advised for every 15 days during the study period<sup>[12]</sup>.

#### **Inclusion Criteria:**

Women having LSCS Scar for not more than 2 years since the cesarean section are considered for the study.

#### **Exclusion Criteria:**

Women under the puerperal period, having scar for more than 2 years, having keloid and who are under any kind of external medication for scar are excluded from the study.

**Method of Data Collection:**

Ethical Clearance was taken from Ethical Committee before starting the research. Participation in this study was voluntary, the details of the study was explained to each patient and a written consent was taken before enrolling them for the study. A standard case proforma was maintained for obtaining the patient's details and the same was used to record them. Confidentiality was maintained with regard to the recorded details of the patients.

**Data Analysis:**

The data obtained from the patients was analysed using “VANCOUVER SCAR SCALE”- Objective Assessment of the scar, before and after medicine in each and every follow up. The Vancouver Scar Scale has 4 main parameters i.e Vascularity, Pigmentation, Pliability, Height. On the basis of these parameters, the LSCS Scar is assessed to know the effectiveness of Thiosinaminum 3x. To assess each parameter in the Vancouver scar scale, the score was calculated separately for each variable before and after medication in each individual patient. The total score was calculated by summation of result of each parameter.

*Table.1. Vancouver Scar Scale*

SCAR CHARECTERISTIC	SCORE
VASCULARITY	
Normal	0
Pink	1
Red	2
Purple	3
PIGMENTATION	
Normal	0
Hypopigmentation	1
Hyperpigmentation	2
PLIABILITY	
Normal	0
Supple	1
Yielding	2
Firm	3
Ropes	4
Contracture	5
Height( mm)	
Flat	0
<2	1
2-5	2
>5	3
Total Score	13

Null hypothesis [H<sub>0</sub>] was formulated for both the objectives.

**OBJECTIVE-1**

Null hypothesis[H<sub>0</sub>]: There is no effectiveness of Thiosinaminum 3x in dissolving LSCS Scar. Alternative hypothesis[H<sub>1</sub>]: There is effectiveness of Thiosinaminum 3x in dissolving LSCS Scar.

**OBJECTIVE-2**

Null hypothesis [H<sub>0</sub>]: There is No Significant difference in 3X attenuation of thiosinaminum in 1 year [Group A] and 2 year [Group B] duration of LSCS scar dissolution.

Alternative hypothesis [H<sub>1</sub>]: There is Significant difference in 3X attenuation of thiosinaminum in 1 year [Group A] and 2 year [Group B] duration of LSCS scar dissolution. The significance of the study is  $\alpha= 0.05$  The qualitative variables were analyzed by Microsoft excel and SPSS version 24 (Statistical Package for Social Science Inc. Chicago III, USA) Software. Inferential statistics such as ‘Paired T-test’ and ‘ANOVA test’ were used to show the Effectiveness of Thiosinaminum 3x in dissolving LSCS scar and to compare its effectiveness in 1 and 2 year duration of scar respectively.

**RESULT**

Total sample comprised of 57 patients [28 - 1 year & 29 - 2 years duration of having LSCS Scar, respectively] after exclusion criteria 25 and 26 from 1 and 2 years duration of scar respectively were given Thiosinaminum 3x. Out of all the patients, 15 from each group were selected for the study by simple random sampling.

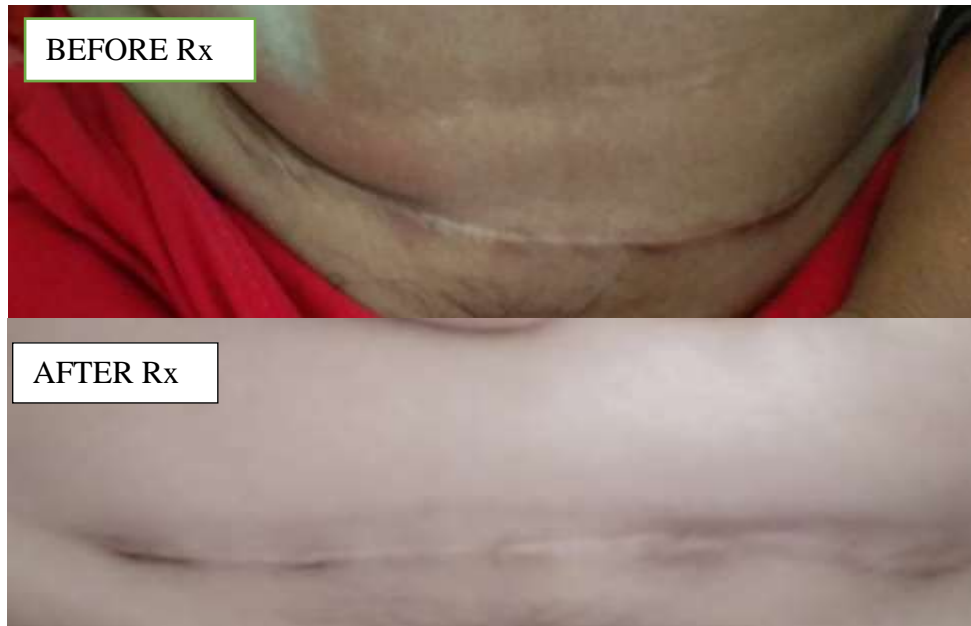
Paired T-test was applied for each group i.e (1 year and 2 year duration of scar) with the total scar score values obtained from the Vancouver scar scale before and after medicine. The Significance value of the study i.e (p value) was found to be less than 0.005 for both the groups A & B, which states that the study is statistically significant. Thiosinaminum 3x had proved to be effective in dissolving the scars in both the durations of the scar groups taken under the study. The Patients under Group A were

around the age of 22-30 whereas the patients under Group B were around the age of 21-34.

To compare the effectiveness in between Group A and Group B, test for equality of means and ANOVA test was done for the scar score values, available for both the groups after medication. The Significance

value i.e. (P-value) of the test between the groups was more than 0.005 which shows that Thiosinaminum had shown its effect under both the groups and there is not much variation in them. Irrespective of the duration of the scar, Thiosinaminum 3x had found to be effective in scar dissolution.

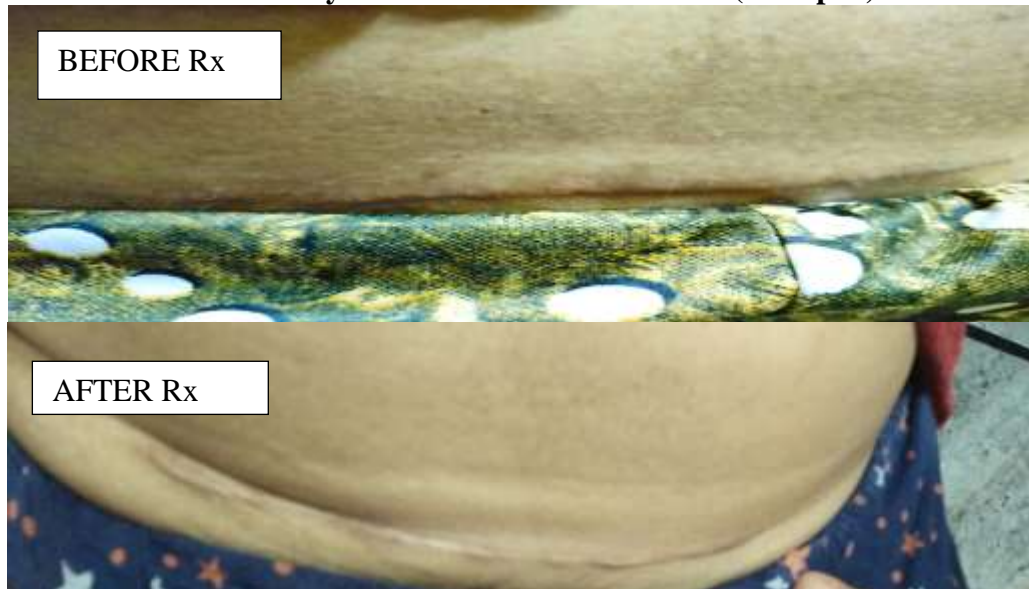
#### Case-1 -1year Duration of LSCS Scar (Group-A)



#### Case-2- 1year Duration of LSCS Scar (Group-A)



### CASE-3- 2 years Duration of LSCS Scar (Group-B)



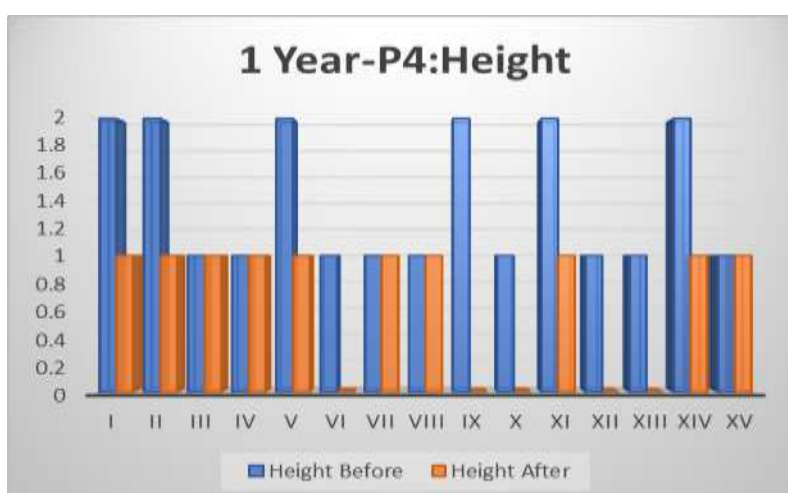
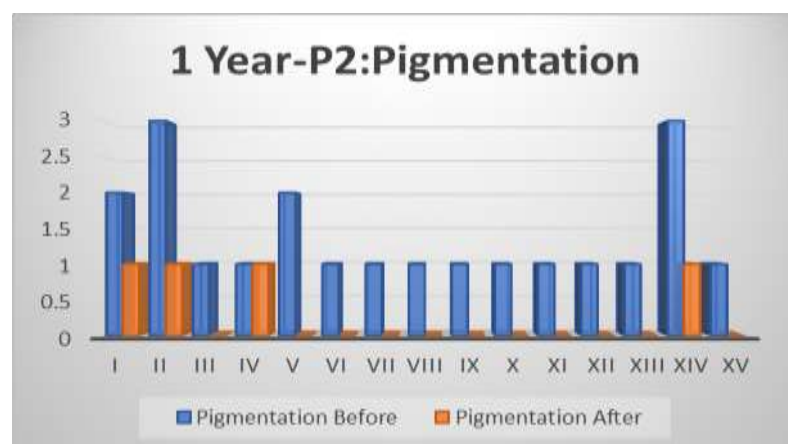
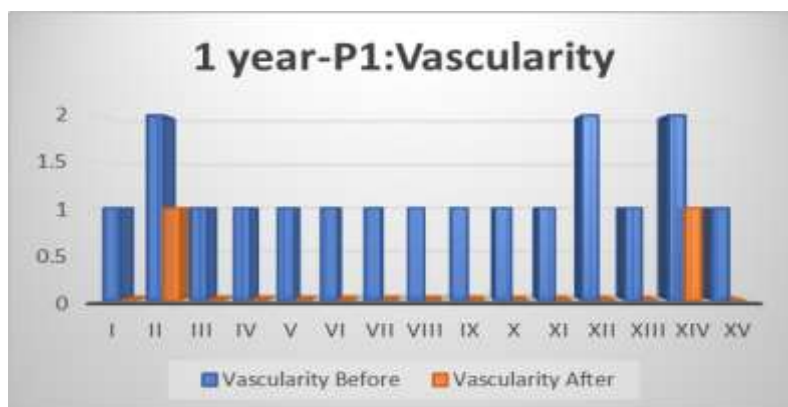
### CASE-4- 2 years Duration of LSCS Scar (Group-B)

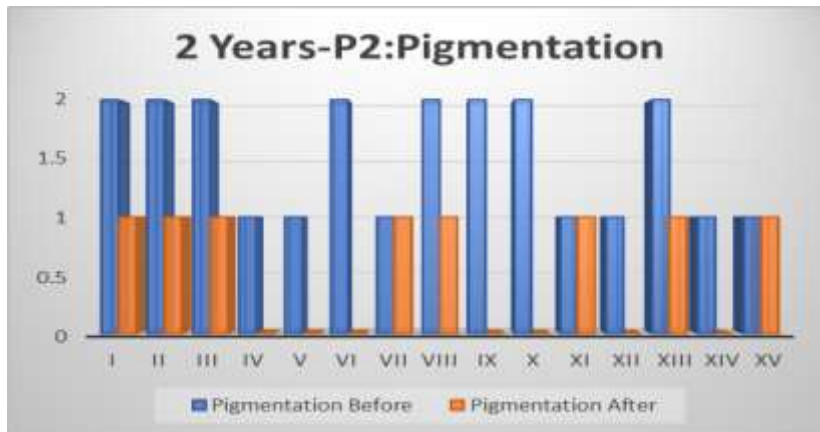
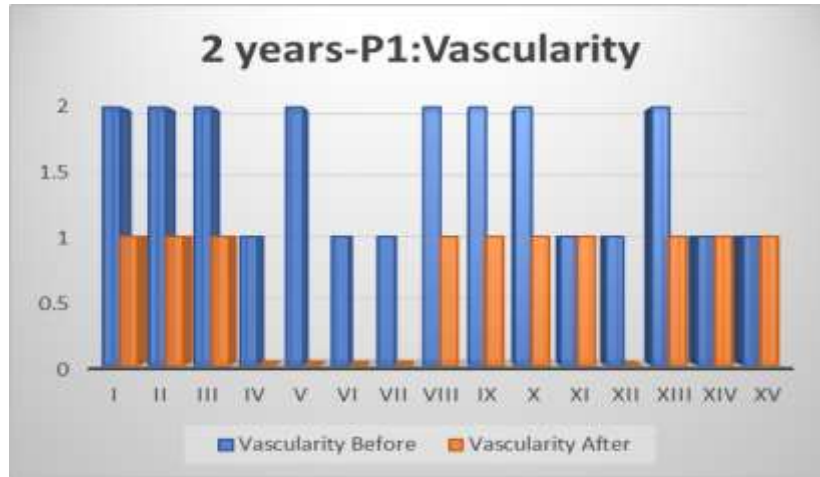


#### Assessment of Individual Parameters of Scar Scale:

When we take individual variables of Vancouver Scar Scale, we have 4 different parameters i.e. (Vascularity, Pigmentation, Pliability, Height) which were taken to assess the scar, before after medication. In Group A (1 year duration of scar), maximum number of patients had found improvement in parameters like vascularity and pigmentation when compared to height of the scar after medication. Whereas in Group B (2 years duration of scar), the maximum number of patients had

improvement in parameters like pigmentation and pliability than vascularity and height of the scar. In comparing the parameters for both the groups, the vascularity, pigmentation and pliability was much improved in Group A than Group B, whereas the difference in the parameter of height before and after medicine in both the groups was rarely found. Through this, we can state that, in general there is overall difference in the total scar score obtained before and after medication with the use of Thiosinaminum 3x.







**Assessment of Null Hypothesis:**

**OBJECTIVE-1** After applying T-test for each group i.e. Group A and Group B, P-value was found to be less than 0.005 hence the Null Hypothesis [H0] of the study is getting rejected whereas the Alternative Hypothesis [H1] is getting accepted. The study was found to be statistically significant stating that Thiosinaminum was effective in dissolving LSCS Scar.

**OBJECTIVE-2** In comparing the groups with equality of means and ANOVA test, the P- value was found to be greater than 0.05 which states that Null Hypothesis [H0] of the study is getting accepted whereas the Alternative Hypothesis[H1] is getting rejected. Thus from the above observations and calculations, it is clear that there is statistical difference in using Thiosinaminum 3x for dissolving the LSCS Scars in general.

Fig.4.Total Scar Score before& after medicine in 1 year duration of scar [Group A].

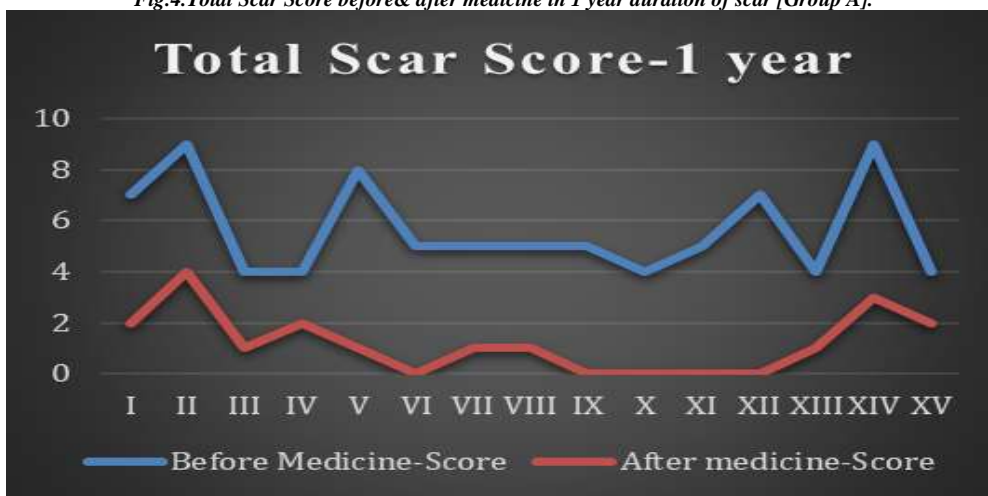
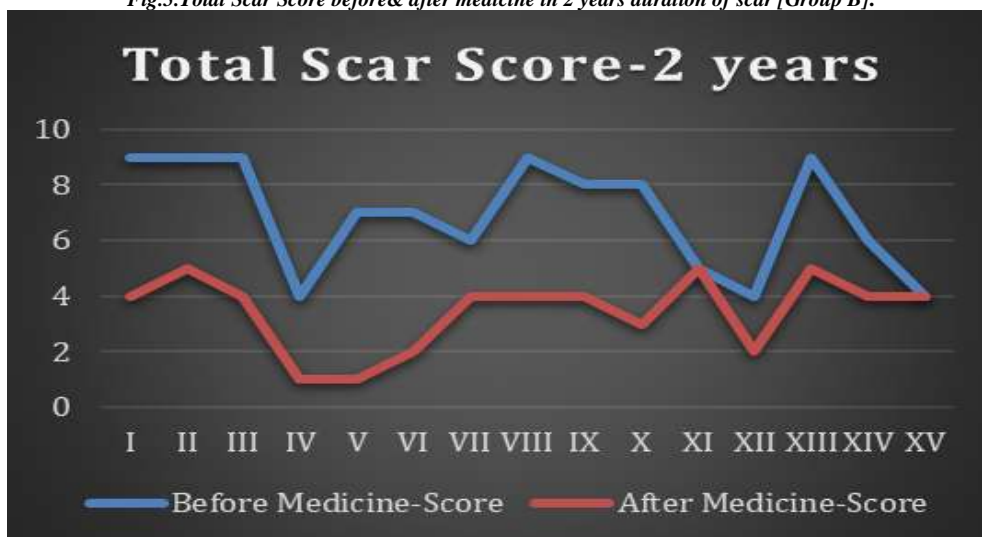


Fig.5.Total Scar Score before& after medicine in 2 years duration of scar [Group B].



**DISCUSSION**

This study was designed to assess the effectiveness of Thiosinaminum 3x in dissolving LSCS Scar of women residing in Sangareddy and to compare its effectiveness in women having the scar for 1 & 2 year duration, during which we found that

irrespective of duration of LSCS scar, the medicine i.e. Thiosinaminum 3x, had showed its effect in dissolving the scar. The significance value of each group was found to be less than 0.005 which states that the study is statistically significant.

## THIOSINAMINUM<sup>[11]</sup>

**Common name-** Allyl Sulphocarbamide

**Source-** Mineral Kingdom

**Derived from-** Ethereal oil of mustard seed ((Rhodallin)/Allyl sulphocarbamide/Sinapis)

**Constituents-** allyl thio-urea compound

**Preparation-** Trituration of crystals, solution in alcohol.

The clinical verification of the effectiveness of Thiosinaminum in scar dissolution from the literature quoted was done through this study. It acts as resolvent externally and internally for dissolving scar tissue, tumors, enlarged glands, lupus, strictures, adhesions. Dr. William Boericke had suggested the dose and the way how to give thiosinaminum in his *Materia medica*, which is stated as follows: Inject under skin or into the lesion a 10 percent solution in glycerine and water, 15-30 drops twice a week. Internally in capsules ½ grain daily, never more than 3 times a day, 2x attenuation<sup>[11]</sup>.

C. H. Pennoyer relates a case where on examination, he showed stricture of rectum two inches above the anus, there being a tense fibrous band forming a ring opening, which would not admit the index finger. Thiosinaminum was given twice daily to that patient. Later the patient was found much improved and on examination the cicatricial band had gone, the speculum could be introduced<sup>[13]</sup>. Thiosinaminum was used for various other conditions like in plantar fasciitis with calcaneal spur, where most patients with relatively recent symptoms have responded well to Thiosinaminum 3x whereas Patients with longstanding symptoms responded to Thiosinaminum 3x combined with *Mercurius corrosivus* 30c or *Mercurius biniodatus* 6c<sup>[14]</sup>. In a study done on urethral strictures and its Homoeopathic management, the Thiosinaminum was quoted in the therapeutics part for its ability to dissolve scars formed anywhere in the body. The resolving power of this remedy in scar cases cannot be matched by any other medicine<sup>[15]</sup>.

In current modern medicine practice, cutaneous scars are treated using corticosteroids injections or cryotherapy, surgical revisions, topical gels, sheets and pressure garments, radiation and laser treatments. These traditional treatment modalities have shown mixed success and most methods lead only to partial alleviation of scar formation. Further, many of these treatment modalities are associated with other practical issues such as patient discomfort and pain<sup>[16]</sup>. Various studies have been done to know the effect of Homoeopathic drugs like Graphites, Causticum, Calendula, Silicea, Arnica in the treatment of Hypertrophic scar or cicatricial tissue but nowhere the Thiosinaminum was used in the recent studies to know its ability in dissolving the scar tissue. Hence, it needs further research, by carrying out studies on Thiosinaminum.

## CONCLUSION

This study concludes that Thiosinaminum acts effectively in dissolving the scar tissue as observed during this study, and while comparing the patients having LSCS Scar for 1 year and 2 year duration, effectiveness was found in both the groups showing the action of Thiosinaminum 3x on scar irrespective of the duration of the scar. Also, it can be concluded from the study that there is no marked difference found in the action of Thiosinaminum 3x in dissolving LSCS Scar having for duration of 1 and 2 years. The effectiveness of Thiosinaminum 3x was found in both the groups.

In assessing the individual parameters of the scar scale, much difference was found in vascularity and pigmentation in Group A, whereas in pigmentation and pliability for Group B. In General, there was difference noted in the total scar score obtained before and after medication. The study had assessed the effectiveness of Thiosinaminum in scar dissolution when administered in 3x attenuation. Based on the outcome of this study we have clinically verified the use of Thiosinaminum in scar dissolution.

### Declaration by Authors

**Ethical Approval:** Approved

**Acknowledgement:** I would like to gratefully acknowledge the people who have participated in the study.

**Source of Funding:** Self

**Conflict of Interest:** The authors declare no conflict of interest.

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