

Research article

COMPARATIVE STUDY OF ALOE VERA AND ABROMA AUGUSTA WITH SPECIAL REFERENCE TO DYSMENORRHOEA

Arora Minaxi*¹, Kaushik Bal Krishan², Dhingra Gitika A³, Sreelesh Brinda³, Vaze Varsha V³

1. Associate Professor, Shree Lakshmi Narayan Ayurvedic College, Amritsar (Punjab)
2. Prof. & Head, Deptt. Dravyaguna, Govt. Ayurvedic College, Patiala (Punjab)
3. NCRD's Sterling Institute of Pharmacy, Nerul, Navi Mumbai (Maharashtra)

Corresponding Author: Arora Minaxi

ABSTRACT:

Women are the original source of progeny. Pertaining to various ailments of the genital tract, dysmenorrhea is one of the most common in adolescent girls. Keeping this in view the present study was undertaken to compare the effects of *leaf extract of Aloe vera and root extract of Abroma augusta*. Patients were selected of various age groups and comparative results in sign and symptoms along with lab investigations like hemoglobin levels were reported. It was seen that aloe extract has given remarkable improvement in the patients of dysmenorrhea

KEY WORDS: Dysmenorrhoea, Abroma Augusta, Emmenagogue.

INTRODUCTION

Dysmenorrhoea is painful menstruation incapacitating the woman. According to ayurveda it is one of the *yonivyapad* named as *udavartini yoni*. As Acharya Charaka says

“वेगोदावर्तनाद्योमुदावर्तयतेऽनिलः । सा रुगातरजः कृच्छ्रेणोदावृत्तविमुञ्चति ॥

आर्तवेसाविमुक्तेतुतत्क्षणलभतेसुखम् । रजसौगमनादूर्ध्वज्ञेयोदावर्तिनीबुधै ॥

“स फेनिलमुदावर्तरजः कृच्छ्रेण मुञ्चति ॥ चतसृष्वपिचाद्यासुभवन्त्यनिलवेदना ॥”¹

If natural ways are suppressed, *vayu* takes upward course in the genital tract due to which the woman suffering from pain discharge the menstrual blood with difficulty because of its having taken upward tendency. After discharge of the menstrual blood, she feels relief instantly. Because of the upward course of menstrual blood it is known by ‘udavartini’. According to Acharya Sushruta

“वेगोदावर्तनाद्योनिंप्रीडयतिमारुतः । साफेनिलरजः कृच्छ्रादुदावृत्तं

विमुञ्चति इयं व्यापदुदावृता ॥..... ॥

“साफेनिलमुदावर्तरजः कृच्छ्रेण मुञ्चति । चतसृष्वपिचाद्यासुभवन्त्यनिलवेदनाः ॥”²

Incidence-

It is one of the most frequent gynaecological complaints of the girls in their late teens and women in early twenties. It is more prevalent in young single woman leading sedentary lives and its frequency has some economic importance for the patients who are often incapacitated from work for one or more days during each menstrual period.

MATERIALS AND METHODS

Plant Material: -Leaves of *aloe vera*

Root of *Abroma augusta*

The two herbs were selected with their special reference as emmenagogue. According to wealth of India the viscid sap of *Abroma augusta* is a valuable emmenagogue in neuralgic dysmenorrhea and leaves of aloe is used for congestive and nervous dysmenorrhea.

The important references are-

Aloe vera-

“वीराढावः सहासारः कुमारीरससम्भवः । सहासारोऽग्निजननः पित्तनिर्हरणोमतः ॥

बलकृद्रेचनः पुष्पजननो गर्भपातनः । विट्सङ्गेकृमिरोगे च संन्यासेऽपस्मारः । यथा ॥

लुप्ते रजसिनारीणां शीतपित्ते । ज्वरे श्लेष्मोद्वेप्लीहिमन्देऽग्नौ च प्रयुज्यते ॥ अत्र अत्र ३

“मुसब्बर यकृतकाक्रियावर्द्धक, मृदुरेचक, आर्तवरजः षोडशकारि एवं कृमिनिःसारक ह ॥”⁴

इतव उंनहनेजं.

“पीवरी योषिणीसास्यादयो निव्यापदनाशिनी रजोदोषप्रशमनी ॥”⁵

“उलटकम्बलः उक्तोपिशाचकार्पासी च तम् ।

नष्टकृच्छ्रात्तवहन्ति गर्भाशयस्य शोधकः ॥

कटिश्रोणित्रिकसकियागतं शूलं व्यपोहति स ।

विशेषवस्तुव्याधिनां वनितानां विनाशकः ॥”⁶

Preparation of Plant Extracts:-**1. Preparation of ALUA (Aloe Extract):-**

Leaves of aloe vera were collected, washed, and peeled off to make it a homogeneous pulp, the peeled pieces of leaves were put in grinding machine and the pulp was obtained. The whole pulp was put on low flame to condense it to a brownish black colour substance. Then it is dried for two days in dry chamber. The dried substance is then powdered and was filled in 300mg capsules per dose.

2. Preparation of Root Extract of *Abroma augusta*:-

The roots of *Abroma Augusta* were split into very small pieces and they were put into 4 folds of water and boiled at low flame. When it remained 1/4th of its amount it was made to cool and dried in dry chamber. Then it was grinded and filled in 3mg capsules per dose.

3. Root Powder Of *Abroma Augusta*:-

Fresh, clean root was dried in the drier to make it moisture free then grinded to make it fine powder. Then powder was preserved in air tight container to be given as 3gm dose per patient.

Dosage:-

| | | | | | |
|-------------------------------|---|-------|---|---------|------------------|
| ALUA (aloe vera extract) | - | 300mg | - | group 1 | |
| ABROMA AUGUSTA (extract) | - | 300mg | - | group 2 | |
| ABROMA AUGUSTA (root powder)- | | 3 gm | - | group | 3(Standard tool) |

Duration:-

Seven days before mensuration , Two times a day and is advised for 3 cycles per patient.

Anupana:-

Take warm water.

Pathya Apathya:-

Pathya :- Buttermilk , sura , aasav , arishta , non veg diet , urad , shali , etc .

Apathya :- Contaminated food, unhygienic food .

Patients were selected and evaluated on the basis of following signs and symptoms:-

“वातलाहारचेष्टायावातलायाः समीरणः । विवृद्धो योनिमाश्रित्य योनेस्तोदंसवेदनम् ।।

स्तम्भं पिपीलिकासृष्टिमिव कर्कशतांथा । करोति सुप्तिमाया संवातजांश्चापरां गदान् ।।

सास्यात् सशब्दरुक्फेनतनुरुक्षार्तवाऽनिलात् ।। 6

In the woman of vatika constitution following vata aggravating diet and practices , vata gets aggravated and having been located in genital tract produces piercing and other types of pain , stiffness , hardness and numbness of vagina, exhaustion and other vatika disorders. Due to vata, menstrual discharge appears with sound , painful , thin and rough.

Signs and Symptoms-

1. Duration and amount of mensuration discharge
2. Lumbar pain
3. Headache
4. Vomiting
5. Nausea
6. Sleeplessness
7. Flatulence
8. Constipation
9. Diarrhoea
10. Anorexia

11. Perspiration
12. Irritated Behaviour
13. Unconsciousness
14. Anaemia

RESULTS & DISCUSSION:-

Due to **laghu ,ruksha and tikshanguna,tiktarasa,katuvipaka and ushnavirya** of **Aloe extract**, effectively acts in congestive and nervous type of dysmenorrhea whereas presence of **laghu and rukshaguna ,katu and tiktarasa,katuvipaka and ushnavirya** of abroma root extract acts on neuralgic type of dysmenorrhea.

The chemical constituency of the aloe extract showed presence of aloin as active constituent along with barbaloin,Iso-barbaloin,aloe emidine,homonatoline,emodin,chrusamic acid,chrystonic acid,choline,cholineacetate,saponins,cholinesalicylate,uronicacid7-hydroxy chrommone,sugars,mucopolysacchrides,hexuronic acid,allinase etc.Theabromarootextractcontainsbeta sterols,stigmasterols,octasanol,teraxesterols,choline,betain, fatty acids,friedilin,abromasterolsand resins as acting substances.

The findings of the study have been discussed as below:-

- Dysmenorrhoea is seen in age group of 16-20 years of age among the selected 45 patients .
- The symptoms of lumberache, headache , constipation , flatulence were seen at the higher rate among all the symptoms.
- Group.1 showed 77.8%result in Duration and amount of mensuration discharge, Group2showed55.5% andGrp.3 showed71.4% results.
- Group1 showed 73.3%result in lumbar pain, Group2 showed 53.3% andGroup3 showed73.4% results.
- Group1 showed 0%result invomiting, Group 2 showed 33.3% andGroup3 showed0% results.
- Group1 showed6 6.7%result in nausea,Group2 showed 40% andGroup.3 showed75% results.
- Group1 showed 62.5%result in sleeplessness, Group2 showed 55.6% andGroup3 showed55.6% results.
- Group1 showed 78.6%result in flatulence,Group2 showed38.4% andGroup3 showed61.5% results.
- Group1 showed 72.7%result in constipation, Group2 showed 38.4% andGroup3 showed61.5% results.
- Group1 showed 63.6%result in anoraxia, Group2 showed 54.5% andGroup3 showed40% results.

- Group1 showed60%result in perspiration, Group2 showed 40% andGroup3 showed37.5% results.
- Group1 showed55.5%result in irritated behavior, Group2 showed 44.5% andGroup3 showed40% results.
- Group1 showed 0%result in unconciousness, Group2 showed 0% andGroup.3 showed33.3% results.
- Group1 showed 2.06%result in anemia, Group2 showed 73% andGroup3 showed1.67% results.
- **Group1 Showed53.3%result in total,Group2 showed 42.2% results in total and Group3 showed 48% in total.**

- **Table 1: Findings of Group 1(B.T.-before treatment;A.T.-after treatment)**

| Sym. | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 10 | 10 | 11 | 11 | 12 | 12 | 13 | 13 | 14 | 14 |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pt.no. | B.T | A.T | b.t | A.T | B.T | A.T | B.T | A.T | B.T | A.T | B.T | A.T | B.T | A.T | B.T | A.T | B.T | A.T | B.T | A.T | B.T | A.T | B.T | A.T | B.T | A.T | B.T | A.T |
| 1 | + | - | + | - | + | - | - | - | + | - | + | + | + | - | + | - | - | - | + | - | + | - | + | + | - | - | + | - |
| 2 | + | - | + | - | + | - | - | - | + | + | - | - | + | + | - | - | - | - | + | + | - | - | + | - | - | - | + | - |
| 3 | - | - | + | - | - | - | - | - | + | - | - | - | + | - | + | + | - | - | + | - | - | + | + | - | - | - | - | + |
| 4 | - | - | + | - | + | + | - | - | + | - | + | - | - | - | - | - | - | - | + | + | - | - | - | - | - | - | - | - |
| 5 | - | - | + | - | + | - | - | - | + | - | + | + | + | - | - | - | + | + | + | - | - | - | + | - | - | - | - | - |
| 6 | + | + | + | + | + | + | + | + | + | + | - | - | + | - | - | - | - | - | - | - | + | + | - | - | - | - | + | - |
| 7 | + | - | + | - | - | - | - | - | + | - | + | + | + | - | - | - | - | - | - | - | - | - | - | - | - | - | - | + |
| 8 | - | - | + | + | + | - | - | - | + | - | - | - | + | + | + | + | - | - | + | - | - | - | + | + | - | - | + | - |
| 9 | + | - | + | - | + | - | - | - | + | + | - | - | + | - | - | - | - | + | - | + | + | - | - | - | - | - | - | - |
| 10 | + | + | + | + | - | - | - | - | + | - | + | - | + | - | + | - | + | - | - | - | - | - | + | - | - | - | - | - |
| 11 | - | - | + | + | + | + | - | - | + | - | + | - | + | + | + | + | - | - | - | - | + | + | + | + | - | - | - | - |
| 12 | + | - | + | - | - | - | - | - | + | + | + | - | + | - | + | - | - | - | - | - | - | - | + | - | - | - | + | - |
| 13 | + | - | + | - | + | - | - | - | + | + | - | - | + | - | - | - | - | - | - | - | + | - | - | - | - | - | - | + |
| 14 | - | - | + | - | + | - | - | - | + | - | + | - | + | - | - | - | - | - | + | + | - | - | - | - | - | - | - | - |
| 15 | + | - | + | - | + | + | - | - | + | - | + | + | + | - | + | - | - | - | - | - | - | - | + | + | - | - | - | - |

Table 2: Findings of Group 2

| S y m | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P t. n o . | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A | B | A |
| 1 | - | - | + | - | + | - | - | - | + | + | + | - | + | + | + | - | - | + | + | + | + | - | + | + | - | + | + | - | - | + | - | - | + | - |
| 2 | + | - | + | + | + | + | - | - | + | + | - | - | + | + | + | + | - | - | + | + | + | + | + | + | + | + | + | - | - | + | - | - | + | - |
| 3 | + | + | + | - | - | - | + | + | - | - | + | - | - | + | + | + | + | - | - | - | - | - | - | - | - | - | - | - | - | + | + | + | + | + |
| 4 | - | - | + | + | + | - | - | + | + | + | + | - | - | - | - | + | + | - | - | - | - | - | - | - | - | - | - | - | - | + | + | + | + | + |
| 5 | + | - | + | - | - | - | + | - | - | - | + | + | + | - | - | - | - | - | + | - | + | - | + | - | + | - | - | - | - | + | - | - | + | - |
| 6 | - | - | + | + | + | - | - | - | + | - | + | - | + | + | + | + | - | - | + | - | - | - | - | + | - | - | + | - | - | - | - | - | + | + |
| 7 | + | + | + | - | + | - | - | - | - | + | - | - | + | - | + | - | - | - | + | + | + | - | + | + | - | + | + | - | - | - | - | - | - | - |
| 8 | + | - | + | + | + | - | - | - | + | + | + | - | + | + | + | + | - | - | + | - | + | - | + | + | + | + | + | - | - | - | - | - | - | - |
| 9 | - | - | + | - | + | + | - | - | + | - | - | - | + | + | + | + | - | - | - | + | + | + | + | - | + | + | - | - | + | - | - | + | - | - |
| 10 | - | - | + | - | - | - | - | - | + | - | - | - | + | - | + | - | - | - | + | - | - | + | + | - | + | + | - | - | - | - | - | - | + | + |
| 11 | + | - | + | + | - | + | - | - | + | + | + | + | + | + | + | - | - | - | + | - | + | + | - | - | - | - | - | - | - | - | - | - | - | - |
| 12 | - | - | + | - | + | - | - | - | + | - | - | - | + | + | + | + | - | - | + | - | - | - | + | - | - | + | - | - | - | + | - | - | + | - |
| 13 | + | + | + | + | + | + | - | - | + | + | + | - | + | - | + | + | - | - | + | + | - | + | + | - | + | + | + | + | + | + | + | + | + | + |
| 14 | + | + | + | + | + | + | - | - | + | - | - | - | + | - | + | - | - | - | + | + | - | + | + | - | + | + | - | - | - | - | - | - | - | - |
| 15 | + | - | + | + | + | + | - | - | + | - | - | - | + | - | + | - | - | - | + | + | - | - | - | - | + | + | - | + | + | - | + | + | + | + |

Table 3: Findings of Group 3

| Sy m. | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 10 | 10 | 11 | 11 | 12 | 12 | 13 | 13 | 14 | 14 |
|-----------|--------|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----|
| Pt. no | B T | A.T | B T | A T | B T | A T | B T | A T | B T | A T | B T | A T | B T | A T | B T | A T | B T | A T | B T | A T | B T | A T | B T | A T | B T | A T | B T | |
| 1 | - | - | + | - | + | - | + | + | + | - | + | + | + | + | - | + | + | + | - | + | + | + | + | - | - | - | + | - |
| 2 | + | - | + | - | + | - | - | - | + | + | - | - | + | - | - | + | - | + | + | + | - | - | - | + | - | + | + | + |
| 3 | - | - | + | - | - | - | - | - | + | - | - | - | + | + | + | + | - | - | + | - | + | + | - | + | - | + | - | + |
| 4 | - | - | + | - | + | + | - | - | + | - | + | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 5 | - | - | - | - | + | - | - | - | + | - | + | + | + | + | + | + | + | + | + | + | + | + | + | - | - | + | + | + |
| 6 | + | + | - | + | + | + | + | + | - | + | - | - | + | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 7 | + | - | + | - | - | - | - | - | + | - | + | + | + | + | + | + | + | + | + | - | + | + | + | + | - | + | - | - |
| 8 | - | - | + | + | + | - | - | - | + | - | - | - | + | + | + | + | + | + | + | - | + | - | - | - | + | - | + | - |
| 9 | + | - | + | - | + | - | - | - | + | + | - | - | + | + | - | - | + | + | - | + | + | + | + | - | + | + | - | + |
| 10 | + | + | + | + | - | - | - | - | + | - | + | - | + | - | - | - | - | - | - | - | - | - | - | + | - | + | - | + |
| 11 | - | - | + | + | + | + | - | - | + | - | + | - | + | - | - | - | - | + | + | - | + | + | + | - | - | - | + | + |
| 12 | + | - | + | - | - | - | - | - | + | + | + | - | + | - | + | + | + | + | + | - | + | - | - | - | + | + | + | + |
| 13 | + | - | + | - | + | - | - | - | + | + | - | - | + | - | + | + | + | - | - | + | - | - | - | + | - | + | - | - |
| 14 | - | - | + | - | + | - | - | - | + | - | + | - | + | + | - | + | - | - | + | - | + | - | + | - | - | + | - | - |
| 15 | + | - | + | - | + | + | - | - | + | - | + | + | + | + | + | + | + | + | + | + | + | + | + | + | - | + | + | - |

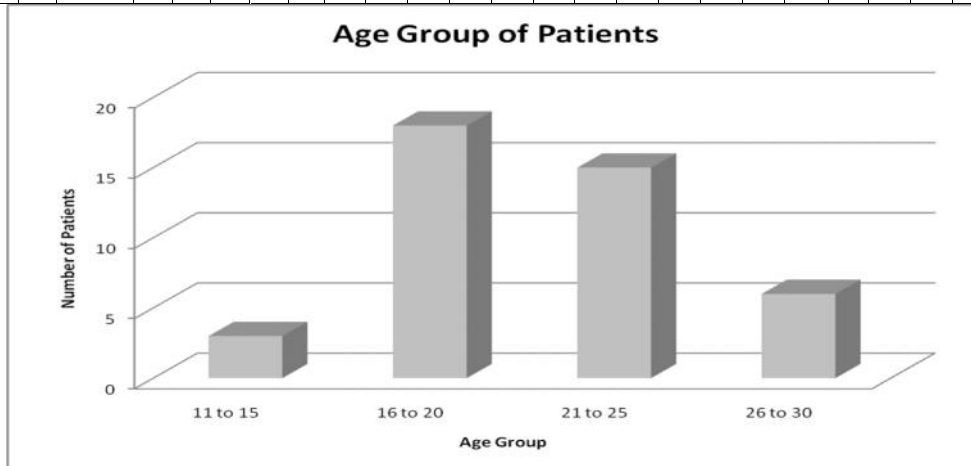


Fig 1: Details of Sample chosen for Study

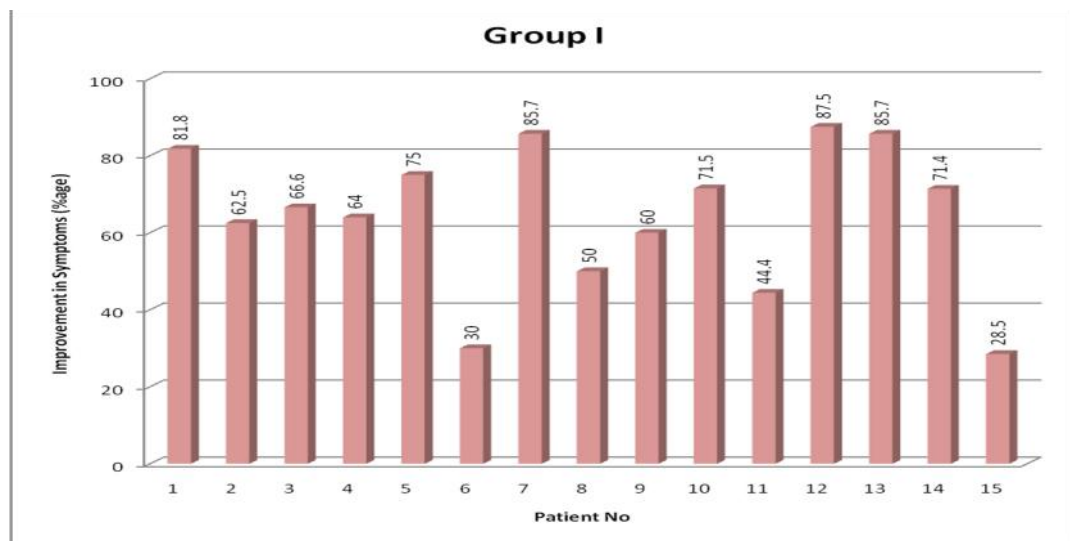


Fig 2: Bar Diagram for improvement in each patient of Group I

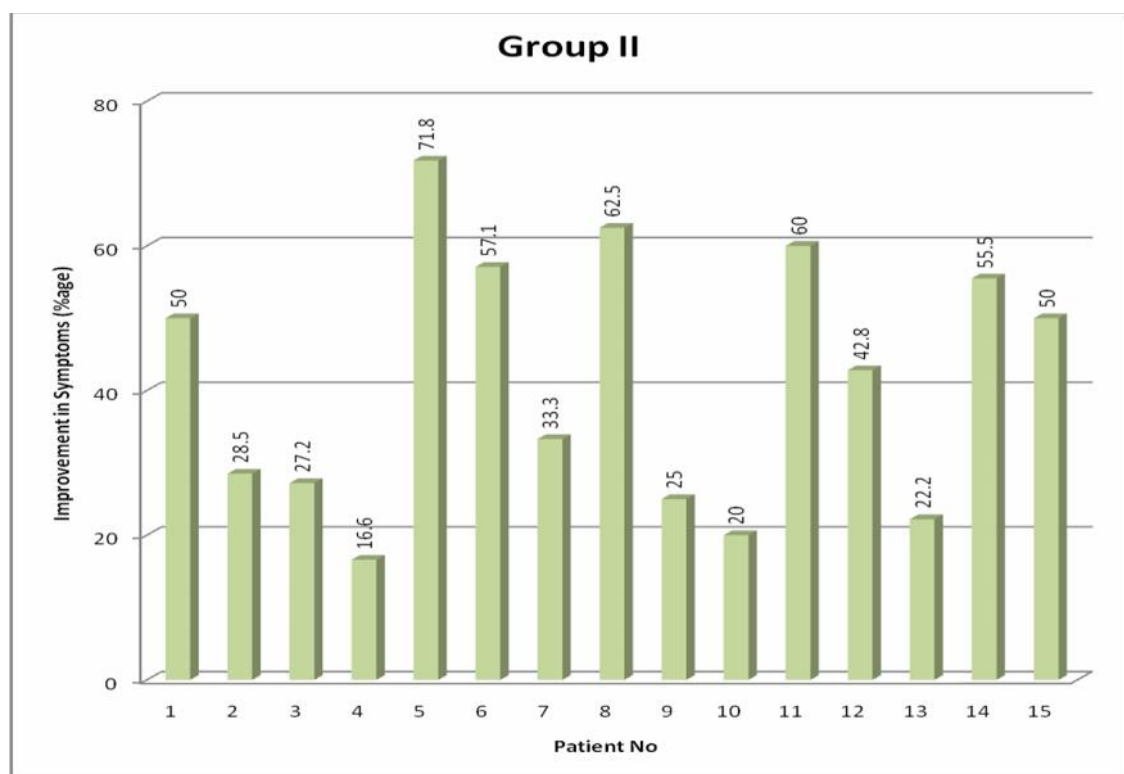


Fig 3: Bar Diagram for improvement in each patient of Group II

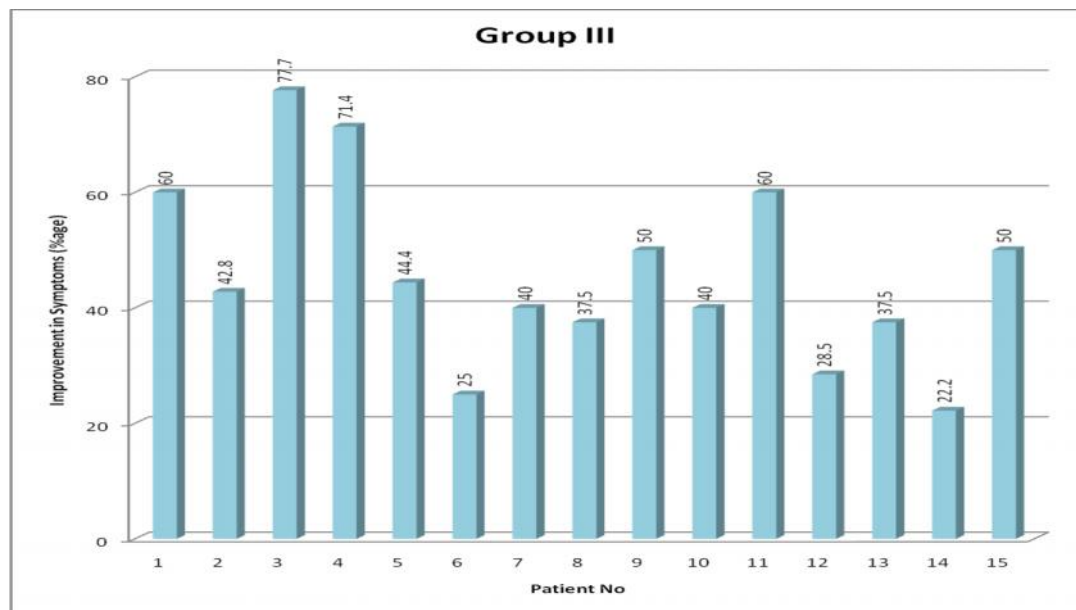


Fig 4: Bar Diagram for improvement in each patient of Group III

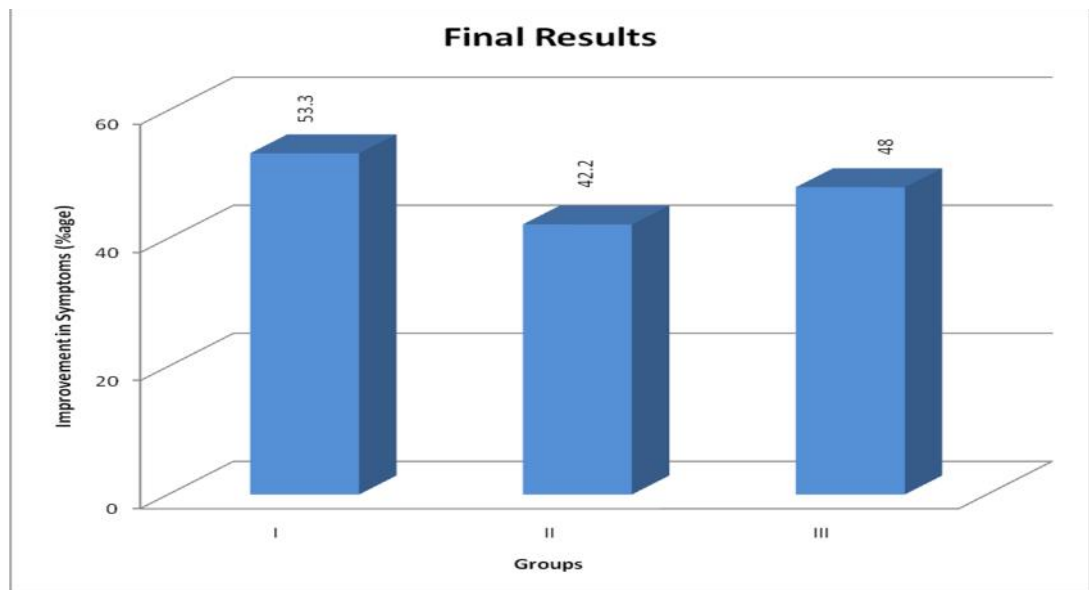


Fig 5: Bar Diagram for showing improvement in groups

CONCLUSION:

The present study was undertaken to compare the effects of *leaf extract of Aloe vera and root extract of Abroma augusta*. Patients were selected of various age groups and comparative results in sign and symptoms along with lab investigations like hemoglobin levels were reported. It was seen that aloe extract has given remarkable improvement in the patients of dysmenorrhea.

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