ABSTRACT
God has sent His prince i.e Human to enjoy ever-pervading different kinds of beauty on this wonderful planet –Earth. But the obstacle which deprives human to do so, goes by the name of disease Timira i.e. Cataract. Most of the masses find excessive difficulties in seeing after the age around 50 years. In India Cataract has been reported to be responsible for 50-80% of the bilaterally blind in the country. There is yet no authentic medicine to alleviate the problem, except going for surgery whose long term visual outcome is far from optimal. The present research work has been taken in to account to find a regime for simply delaying the progression or maturation of Immature Cataract. In present research work 36 patients were selected irrespective of their age sex religion etc. and randomly divided into 3 groups. Akshbeejadi Gutika to the patients of Group-I, Nimi-Nirdista Triphala Ghrita to those of Group-II, and combined drugs were given to Group-III. The evaluation of results was performed on the basis of benefit in signs and symptoms. Summarily composite drugs were more effective than the single ones.

KEYWORDS: Timira, Immature Cataract, Akshabeejadigutika, Triphala Ghrita.

INTRODUCTION
Human is the supreme creation of Almighty God. Having devoted all His excellence of creativity God has sent His prince i.e. human to enjoy the ever-pervading different kinds of
beauty on this wonderful planet i.e. earth. But it is just impossible to do so in the absence of eyesight because a human being having no vision finds this globe a painstaking place and nothing else.

As per Acharya Vagbhata, an excellent orator of Ayurveda, human ought to always make endeavour to protect his precious vision till the late evening of life because the entire globe is worthless for a blind person even in the presence of large amount of wealth & possessions. A person is deprived of the sense of difference between the day and night who has no vision.\[1\]

For maintaining the beauty of universe, the Supreme Controller God has compelled the cells to follow the natural process of decay and die i.e. APOPTOSIS at regular intervals. Timira or cataract formation is nothing but an obedience of this very natural process.

Cataract has been documented to be the most significant cause of bilateral blindness in India where vision < 20/200 in the better eye on presentation is defined as blindness.\[2-7\] In India cataract has been reported to be responsible for 50-80% of the bilaterally blind in the country.\[2-7\] Global agencies for the elimination of avoidable blindness have pledged support to operationalizing strategies to reduce the burden of cataract blindness by the “Vision 2020: The right to sight” initiative.\[8\] Coordinated national efforts were supplemented by a world bank-assisted cataract blindness control project which was launched in seven states of India in 1994.\[9\] From around 1.2 million cataract surgeries per year in the 1980s,\[10\] the cataract surgical output increased to 3.9 million per year by 2003.\[11\] Recent data from the World Health Organization (WHO) shows that there is a 25% decrease in blindness prevalence in India.\[12\] This could be due to the increased cataract surgeries in the country. At the same time the proportion of the aged has also increased significantly in the country. The 60+ population which stood at 56 million in 1991 will double by 2016.\[13\] This increase in population means that the population ‘at-risk’ of blinding cataract will also increase tremendously.

Although many advances have been made in the identification of risk factors for cataract, there is as yet no proven preventive or medical treatment. If we find out any indigenous medicine that simply delays the progressing or maturing of cataract, it will be great achievement for a country like India. It will be a milestone for getting rid of loss of productivity, breakdown of interpersonal relationships esteem and isolated humiliating life. Considering all these facts, a clinical trial on Timira–cataract was carried out to find out a
treatment protocol for the management of the same. For the present study, Akshabeejadi gutika for topical use & Nimi Nirdista Triphala ghrita for oral administration were selected.

AIMS & OBJECTIVES
1. To evaluate the efficacy of Akshabeejadi gutika and Nimi Nirdista Triphala Ghrita in the prevention and management of Prathampatalgata and Dwitiyapatalgata Timira (Immature Cataract)
2. To provide an economic and easily available regime for better vision to the patients of Timira without any surgical intervention.

MATERIALS AND METHODS
For this clinical study, Patients attending the O.P.D. and I.P.D. of department of Shalakya tantra, National Institute of Ayurveda had been selected on the basis of subjective and objective criteria for diagnosis. Patient information sheet were prepared and the patient’s informed and written consent were taken before starting the treatment. The inclusion and exclusion criteria were as follows:

INCLUSION CRITERIA
Males and females willing to participate in the trial between the ages of 40 to 70 years having Prathampatalgata and Dwitiya patalgata Timir (immature cataract).

EXCLUSION CRITERIA
- Patients below the age of 40 years
- Patient above the age of 70 years.
- Patients having mature cataract.
- Patients not interested in the trial
- Patients with complicated cataract.

GROUPING- All the patients were divided into three groups (Group-I, Group-II and Group-III) by simple random sampling method. The patients were selected irrespective of their sex, religion, occupation, education, type of cataract, density of cataract etc.

Group I: Patients of this group were treated by Akshabeejadi gutika Anjan
Group II: Patients of this group were treated by Nimi Nirdista Triphala Ghrita
Group III: Patients of this group were treated by combination of the above two drugs.
NUMBER OF SUBJECTS: Total 52 patients (19, 15 and 18 patients in group I, II, III respectively) were registered for the trial.

DRUGS AND POSOLOGY: The details are as follows

Akshabeejadi gutika anjan (eye drops)
It comprises of Akshabeeja, Marich, Amalaki, Dalchini, Tuttha and Yastimadhu (prepared in RASAYANSHALA, the pharmacy of NIA Jaipur).

- **Dose**: 2 drops twice a day

Nimi Nirdista Triphala ghrita
This was selected on the basis of the fact that Acharya Nimi has indicated that Triphala Ghrita when coupled with Yastimadhu powder and is taken along with honey in the evening, is capable of conquering the disease Timira.

- **Dose**: 1 teaspoonful in the evening

**Duration of Trial** Patients were given treatment for a period of three months.

**Follow Up**-After completion of the treatment, the patients were followed for three months at fortnightly interval.

Criteria for the Assessment
Assessment was done on the basis of improvement in the clinical condition of the patient i.e. relief in signs and symptoms. Scoring was done according to the following rating scale;

1) Avyakta Darshana (Durastha and Samipastha)
   0 – No feeling of blurring of vision
   1 – Occasional blurring of vision.
   2 – Regular blurring without disturbing routine works.
   3 – Regular blurring disturbing day to day works.
   4 – Absolute darkness before the eyes.

2) Vihwala Darshana
   0 – No such problem
   1 – Occasional visualization of any of the object.
   2 – Irregular visualization of two to four false images.
   3 – Regular visualization of two to four false images.
   4 – Regular visualization for more than four images.
3) Dwidha Darshana (Diplopia)
0 – No diplopia
1 – Occassional diplopia
2 – Regular diplopia without disturbing routine work.
3 – Regular diplopia disturbing day to day work.

4) Shirobhitapa (Headache)
0 – No headache
1 – Very occasional headache.
2 – Irregular attacks of frequent headache.
3 – Regular headache.

5) Netrayasa (Eye strain)
0 – After >6 hours of near work.
1 – After 4 – 6 hours of near work.
2 – After 2 – 4 hours of near work.
3 – Before 2 hours of near work.

6) Area of Opacity
0 – No opacity.
1 – Up to 20% opacity
2 – Up to 40% opacity
3 – Up to 60% opacity
4 – Up to 80% opacity
5 – Up to 100% opacity

7) Visual Acuity
It was recorded as numerical convention and later graded in following way:

Snellen’s Chart Grade

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RESULTS

Out of total 52 patients registered 07, 05 and 04 patients from group-I, II and III were dropped out due to different personal, familial and occupational reasons. Hence, results of remaining 36 patients are presented in this clinical study.

Akshabeejadi Gutika anjana provided significant relief in headache(90%), eyestrain(80%), dwividha darshan(66.667), sameepastha avyakta darshan(60%), vihwal darshan(59.091), Durastha avyakta darshan(51.515%), visual acuity of RE(38.889%) and visual acuity of LE(32.759%).

Nimi Nirdista Triphala ghrita provided significant relief in headache(85.714%), eyestrain(77.778%), sameepastha avyakta darshan(60%), vihwal darshan(59.091), Durastha avyakta darshan(59.259%), dwividha darshan(50%), visual acuity of RE(46.809%) and visual acuity of LE(36.364%).

Nimi Nirdista Triphala ghrita and Akshabeejadi Gutika anjana provided significant relief in headache(92.308%), eyestrain(90.909%), dwividha darshan(75%), vihwal darshan(65.217%), sameepastha avyakta darshan(62.162%), Durastha avyakta darshan(62.162%), visual acuity of RE(52.381%) and visual acuity of LE(39.344%).

Comparative effect of therapy can be seen in the table forthcoming.

DISCUSSION

As Timira – cataract is a degenerative disorder, so its pathology can be checked by certain drugs having Chakshushya and Rasayana properties. Most of the ingredients of the Yogas used i.e. Akshabeejadi Gutika Anjana and Nimi Nirdista Triphala ghrita have Chakshushya and Rasayana properties.

The drugs used are having a unique combination of different types of Rasa, Guna, Virya and vipaka and this is responsible for the results obtained.
Kledopasosana, Slesmopososana properties are possessed by Tikta Rasa. Kashaya Rasa shows its Shoshana, more particularly Kleda Shoshana and Shleshma Prashamana properties.

Tikta Rasa shows its Chhedana property, Katu Rasa is Tikshna and possesses Marga Vivarana action. Because of these inherent properties of the drugs, after getting absorbed it may scrap away the vitiated Kapha, Ama and Meda already lodged in the Patalas, Rupavaha Siras as well as in Drishti. The Shuddha Srotasa (opened channel) allowed free movement of Vata, Pitta and Kapha resulting into alleviation of Kapha and Vata along with enhancement with Pitta. This Pitta performs its normal functions of visual perception which were previously experiencing hindrance due to vitiated Kapha. The specific activity like Kaphahara and Pittavardhaka may overall attempt to enhance the qualities of Tarpaka Kapha and Alochaka Pitta by eliminating the disturbance related to them.

The drugs having Madhura Rasa and Madhura Vipaka possess Rasayana, Chakshushya, Jivaniya, Balya etc. properties. Because of its Rasayana action the substrate Dhatus of the poor Patalas as well as Drishti are nourished, thus by improving the functional capacity of the eye, there is declined in various symptoms. Madhura Rasa and Madhura Vipaka also pacifying the Vata Dosha, which is the most important factor responsible for senile disorders.

Ushna Virya has Lekhana, Chhedaniya,Shodhana, Rasayana, Chakshushya and Kaphanashaka effect and simultaneously Shita Virya helps in maintaining the Shita Satmya of the Drishti which is a therapeutic property of the Drishti.

Table showing comparative effect of therapy in Group-i, ii &iii

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<th>S.N</th>
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#### CONCLUSION

- Ayurvedic medicines have the potential of successfully checking the progression of immature cataract. In addition to it, the possibility of cataract formation can also be inhibited by observing Chakshusya regimen coupled with Rasayana Sevana.
- In the present study, cases of senile cataract were undertaken with the treatment schedule of three months. Further large population study and long duration treatment schedule is necessary to establish the firm conclusions.

#### REFERENCES


