ORIGINAL RESEARCH PAPER VOLUME-6 | ISSUE-8 | AUGUST - 2017 | ISSN No 2277 - 8179 | IF : 4.176 | IC Value : 78.46

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

ANALYSIS OF PRESENILE CATARACT RISK FACTOR AND TYPE OF CATARACT

Ophthalmology

Dr. Divya Patel Fellow-sankara eye hospital, Mogar,Anand(Gujrat).

Dr.Nisha Ahuja Consultant(cataract & cornea), Sankara eye hospital, Mogar,Anand(Gujrat). - CO-AUTHER

ABSTRACT

Cataract is the formation of opacity of the crystalline lens . .cataract is major cause of blindness worldwide.senile cataract usually presents after 50 year of age due to degenerative changes,which is major cause of blindness in worldwide.cataract which developes before age ofn 50 called presenile cataract.some major risk factor for presenile cataract are sunlight exposure,trauma,steroids,diabetes,myopia,uvietis.All type of cataract found in presenile cataract.

AIM- The aim was to analysis of risk factor for developing presenile cataract and determine type of cataract.

MATERIAL AND METHODS- Design of study was prospective observational study.Patient attending in outreach camp of ophthalmology department were in this study who found presenile cataract.They were undergo a complete ocular examination and proper history taking.The type of cataract and cause of cataract formation identified and documented and analysed using all information.

RESULT- 200 eyes were examine and include in this study.most commen cataract we found in our study was nuclear cataract. The common cause we identified were sunlight exposure,steroid use,trauma and most of them idiopathic in nature.

CONCLUSION- Presenile cataract increases because of life style and we found more due to outreach camps.by doing proper protection from sunlight,less steroid use,diabetic screaning camps we can prevent formation of presenile cataract.

KEYWORDS:

Presenile cataract,Type of cataract,Risk factor

INTRODUCTION- Cataract is the formation of opacity of the crystalline lens . .cataract is major cause of blindness worldwide. In India, almost 80% of blindness is attributed to cataract and there is a high prevalence of lens opacities.[1,2] These usually are caused by degenerative changes in the lens often occurring after the age of 50 years.[3,4] Age related cataract is a multifactorial disease and different risk factors play a role in different types of cataract formation. age is still the single most important risk factor for cataract . Pre senile cataract by definition is the occurrence of cataracts before the age of 50 years[3,4]Recently the incidence of early onset cataract is on the rise. This will definitely add on to the currently existing burden of age related cataract. few studies have been undertaken to explore risk factors for presenile cataract and they indicate that nearly 50% of the participants were exposed to at least one known risk factor including trauma, intraocular inflammation, diabetes mellitus, and the use of steroids.[5,6,7] Active smoking, alcohol use, severe malnutrition, ultra violet ß–radiations (290 nm to 320 nm), severe diarrhea causing dehydration is among other risk factors for cataract formation.presenile.cataract. presents with nuclear,cortical,posterior subcapsular posterior polar or mixed.posterior subcapular is common amongs all[8]

The present study conducted to analyze various risk factor and types of cataract in presenile cataract in 30 to 50 year age group.the study was undertaken at sankara eye hospital.mogar,gujrat,india between fabruary 2016 to fabruary 2017.

MATERIAL AND METHODS-This is a prospective observational Hospital based study conducted at sankara eye hospital,mogar,gujrat, india. Patients of either gender presenting with cataract aged between 30-50 years either unilateral or bilateral were included. Patients who had congenital or developmental cataracts were excluded from the study. Informed consent was obtained from all participants. All the patients selected were requested to fill up a questionnaire consisting of their age which was confirmed with one of their identity proof, occupation and the amount of sunlight exposure per day, personal habitual addictions to tobacco and alcohol, dietary pattern, history of any systemic disorders like Diabetes mellitus, hypertension, tuberculosis, skin diseases, asthma, or any other diseases for which the patient is on long term drug therapy, any significant ocular trauma, use of any long term topical,any associated ocular disease.patients were examine using snellen for visual acuity,intra ocular pressure using applenation tomometry,type of cataract were categorized on slit lamp cataract was categorized as nuclear,posterior subcapsular,mixed and mature. examination.of fundus done by 90D.

The criteria for selection of high myopic patients in this study were axial length of 26 mm or more and axial length was determined by using A-scab. Diabetes was diagnosed based on the medical history of the patient and verified against the physician's treatment records all patients were tested for random blood sugar. Steroid intake was classified as oral, inhaled, injectable, or topical used for at least 3-4 months. Participants were categorized as having significant sunlight exposure if their occupation meant they spent more than 8 hr a day outdoors for more than 5 days in a weak.on ocular disease history includes only chronic uvietis and coloboma which are more susceptible for cataract development. Patients in whom none of the risk factors were observed were placed into a separate group called the idiopathic category.patient also categorized on the basis of alcohol intake and type of diet vegetarian or nonvegitarian.

STASTICALANALYSIS

RESULTS-

From march2016 to fab 2017 total 200 patients were analysis having presenile cataract attending at sankara eye hospital,mogar,gujrat.data obtained rae follows-

Total 200 patients were evaluated for type of cataract and risk factor for developing early cataract out of which Nuclear cataract,posterior (32.5%) subcapsular cataract(20.5%),mixed nuclear with posterior subcapsular cataract(22.5%),mature cataract(24.5%)

Risk factor associated sunlight(20.0%) ,trauma6.5%),diabetes mellitus(6%),myopia(4%),steroid indused(10.5),ocular disease (3.5%),alcohol(21.5%),diet,nonveg(53%)

Male-,99,female-101
Mean age of presentation- 43 year
Tables showing different distribution of datas.

Table 1-Gender distribution

GENDER	NO.	%
male	99	49.5
female	101	50.5

Table 2-Age distribution

AGE GROUOP	NO.	%
30-35	25	12.5
36-40	44	22.0
41-45	63	31.5
46-50	68	34.0

Table 3- vision distribution

VISION	NO.	%
6/6-6/18	14	7.0
6/18-6/60	84	42.0
6/60-3/60	30	15.0
3/60-PL	72	36.0

Table 4-Type of cataract

TYPE	NO.	%
NS	65	32.5
MC	49	24.5
PSC	41	20.5
PSC/NS	45	22.5

Table 5-Risk factor distribution

RISK FACTOR	NO.	%
IDIOPATHIC	88	44
ENVIROMENT,UV RAYS	40	20.0
STEROID	21	10.5
TRAUMA	13	6.5
DIABETEC	12	6.0
MYOPIA	8	4.0
OCULAR DISEASE	7	3.5
ALCOHOL	43	21.5
DIET/NONVEG	106	53.0

DISCUSSION- A total of 200 eyes of 200 patients were finally evaluated. The mean age was 43 years. There were 99males and 101females in the study.In this study most commen type of cataract presenting with nuclear sclerosis.although posterior subcapsular component including alone and combined with nuclear sclerosis is more than all other type.all risk factor measured in this study are In this study maximum patients came with vision at the time of presentation was between 6/18 to less than 6/60 on snellen chart.

In present study most patients had idiopathic nature for early cataract develpoment.this shows now a days patients came in highlighted because of proper screening and camps.usually PSC component is common in presenile cataract due to steroid uses . which was similar to the observations made in other[9,10] .in our study most of the patients worked outdoor activity,which predisposed to uv light. Lens opacification has been linked to ocular exposure to UV radiation particularly UV B.[11] Few authors[12,13] found a positive correlation between cataract prevalence and duration of sunlight exposure studies. Diabetes also a common risk factor now a days because of increasing diabetes due to life style and junk food.relation between both shown is study[14].

risk factor for the development of cataracts in young patients. High myopia is also a risk factor for cataract formation. Recently, Praveen et al.15 reported that high myopia was a powerful. Similar findings have been reported from Taiwan where an AXL of >27 mm was associated with an increased risk of cataract in individuals below 45 years.[16]

Trauma is common cause of cataract formation in youge age because of more outdoor activity by young people. The change in the direction of the ocular trauma associations for cataract results largely from the strong confounding effects of age and sex on the unadjusted associations (that is, ocular trauma was more frequent in younger people and men, but cataract was more frequent in older people and women[17]).

Ocular disease like uvietis and coloboma associated with early onset of cataract. Cataract is a common complication of uveitis and results from chronic intraocular inflammation and corticosteroid use in treating the inflammation. The incidence of cataract in uveitis varies from 57% in pars planitis [18] to 78% in Fuchs heterochromic iridocyclitis (FHI) [19]

Some amount of Alcohol intake alone is not a major risk factor in . he only adverse effect of alcohol was among smokers: people who smoked and drank heavily had an increased prevalence of nuclear cataract[20].diet either non vegetarian or vegetarian not much affects development of early onset of cataract.proper supplements of Foods containing antioxidants like vitamin C and E, lutein, and zeaxanthin have been shown to lower the risk of cataracts.but som studys says.It is not yet possible to confirm that antioxidants in the diet have a major role to play in the prevention of cataract formation, but epidemiologic studies suggests that it is wise to consume diets rich in vitamin C, E and carotenoids to prevent the early development of cataracts.[21,22]

Vegans who eat no meat or animal products had a 40 percent lower risk of developing cataracts than people in the group who ate 3.5 ounces of meat a day.[23]

CONCLUSION- Pre senile cataract incidence is on the rise due to changes in the lifestyle of the individual starting from his diet, habitual addictions, environmental influences and also because of early medical consultation.regular screening awareness programs and eye camps provide service for unreached patients for detection of early cataract.protection from sunlight,control of diabetes mellitus and less use of steroids,healthy diet and regular checkups can reduses the early cataract formation.

REFERENCES-

1. Mohan M. Survey of blindness—India (1986–1989). In: Summary Results: Programme for the Control of Blindness. Ministry of Health and Family Welfare, Government of India: New Delhi, 1992.
2. Dandona L, Dandona R, Srinivas M, Giridhar P, Vilas K, Prasad MN et al. Blindness in the Indian state of Andhra Pradesh. Invest Ophthalmol Vis Sci 2001; 42: 908–916. | PubMed | ISI | ChemPort |
3. Mosby's medical dictionary. 8th ed. Elsevier; 2009.
4. Miller-Keane encyclopedia and dictionary of medicine, nursing and allied health.
a. 7th edition. Saunders; 2003.
5. Lesiewska-Junk H. Senile and presenile cataract. Survey of patients undergoing cataract surgery. Acta ophthalmologica 1994; 72: 602–605. | Article | PubMed | ChemPort |
6. Mishra AV, Ramswamy MS, Orr AC. Causes of presenile cataracts extracted at the Halifax Infirmary Hospital, 1976–85. Can J Ophthalmol 1989; 24: 117–119. | PubMed | ChemPort |
7. Schwab IR, Armstrong MA, Friedman GD, Wong IG, Carpentieri AC, Dawson CR. Cataract extraction. Risk factors in a health maintenance organization population under 60 years of age. Arch Ophthalmol 1988; 106: 1062–1065. | PubMed | ChemPort |
8 Eye (2010) 24, 686–694; doi:10.1038/eye.2009.137; published online 12 June 2009
9 Black RL, Oglesby RB, von Sallmann L. Posterior subcapsular cataracts induced by corticosteroids in patients with rheumatoid arthritis. JAMA 1960; 174: 166–171. | PubMed | ChemPort |
10 Jick SS, Vasilakis-Scaramozza C, Maier WC. The risk of cataract among users of inhaled steroids. Epidemiology 2001; 12: 229–234. | Article | PubMed | ISI | ChemPort |
11 Cruickshanks KJ, Klein BE, Klein R. Ultraviolet light exposure and lens opacities: the Beaver Dam Eye Study. Am J Public Health 1992; 82: 1658–1662. | Article | PubMed | ISI | ChemPort |
12 Brilliant LB, Grasset NC, Pokhrel RP, Kolstad A, Lepkowski JM, Brilliant GE et al. Associations among cataract prevalence, sunlight hours, and altitude in the Himalayas. Am J Epidemiol 1983; 118: 250–264. | PubMed | ChemPort |
13 Rosenthal FS, Phoon C, Bakalian AE, Taylor HR. The ocular dose of ultraviolet radiation to outdoor workers. Invest Ophthalmol Vis Sci 1988; 29: 649–656. | PubMed | ChemPort |
14 Prchal J, Skalka H, Clements RS, Bradley EL, Conrad ME, Pittman C. Diabetes and risk of cataract development. Metab Pediatr Ophthalmol 1980; 4: 185–189. | PubMed | ChemPort |
15 . Praveen MR, Shah GD, Vasavada AR, et al. A study to explore the risk factors for the early onset of cataract in India. Eye (Lond) 2010;24:686–694. [PubMed]
16 Chen SN, Lin KK, Chao AN, Kuo YH, Ho JD. Nuclear sclerotic cataract in young patients in Taiwan. J Cataract Refract Surg 2003; 29: 983–988. | Article | PubMed
17 . Klein BEK, Klein R, Linton KLP. Prevalence of age-related lens opacities in a population: the Beaver Dam Eye Study. Ophthalmology 1992; 99:546–52. [PubMed]
18 S. M. Malinowski, J. S. Pulido, and J. C. Folk, "Long-term visual outcome and complications associated with pars planitis," Ophthalmology, vol. 100, no. 6, pp. 818–825, 1993. View at Google Scholar • View at Scopus
19 S. Velilla, E. Dios, J. M. Herreras, and M. Calonge, "Fuchs' heterochromic iridocyclitis: a review of 26 cases," Ocular Immunology and Inflammation, vol. 9, no. 3, pp. 169–175, 2001. View at Publisher • View at Google Scholar • View at Scopus
20 untains Eye Study.Cumming RG1, Mitchell P. Arch Ophthalmol. 1997 Oct;115(10):1296-303.Alcohol, smoking, and cataracts: the Blue Mo
21 The American Journal of Clinical Nutrition
22 Jacques PF. The potential preventive effects of vitamins for cataract and age-related macular degeneration. International journal for vitamin and nutrition research 1999 May; 69(3): 198-205.
23 Mvitu M, Longo Mbenza B, Tulomba D, Nge A. Regular, High & moderate intake of vegetables rich in antioxidants may reduce cataract risk in central African type 2 diabetics. Int J Gen Med. 2012; 5: 489-93