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എഡിറ്റോറിയൽ

സുപ്രസംഗങ്ങളെ,

'ഇൻസൈറ്റിന്റെ ഈ ലക്കം നിങ്ങളുടെ കൈവശമെത്തുമ്പോൾ നാമെല്ലാം കേരള ഗവ: ഫ്ലോമെട്രിസ്റ്റിംഗ് അസോസിയേഷന്റെ സംസ്ഥാന സമ്മേളനത്തിന്റെ തിരക്കിലായിരിക്കും അസോസിയേഷൻ ഒരു വയസു കൂടി പിന്നിടുമ്പോൾ നേട്ടങ്ങളുടെ ചരിത്രപുസ്തകവും വെല്ലുവിളികൾ നേരിടുന്നതിലെ ചങ്കുറവും ഇതിന്റെ ഭാരവാഹികളിൽ പ്രകടമാണ്.

സംഘടനയുടെ നിരന്തരമായ ആവശ്യങ്ങൾ സ്വപ്നമായി അവശേഷിക്കുന്നു 'Designation' മാറ്റം, കണ്ണടകൾക്ക് ലൈസൻസ് ഏർപ്പെടുത്തൽ തുടങ്ങിയവ ഈ സമ്മേളനവേദിയിലും ആവശ്യങ്ങളുടെ പട്ടികയിൽ സ്ഥാനം പിടിക്കും. ഐക്യമില്ലായ്മ സ്വപ്ന സാക്ഷാത്കാരത്തിന് തടസമാവുന്നുവോ? ശമ്പള പരിഷ്കരണം കേന്ദ്രജീവനക്കാർക്ക് മാത്രം തെങ്ങുമോ? സാമ്പത്തിക മാനും സർക്കാരിന് പിടിവള്ളിയാകുമോ? ആവശ്യവസ്തുക്കളുടെ വിലകയറ്റം സാധാരണക്കാരന്റെ നട്ടെല്ലാടിക്കുമ്പോൾ ശമ്പള പരിഷ്കരണം ഒരു ഔദാര്യമല്ല ജീവനക്കാരന്റെ അവകാശമായി മാറുന്നു പുതിയ ശമ്പള കമ്മീഷനെ ഉടൻ നിയമിക്കുമെന്ന ധനമന്ത്രിയുടെ പ്രഖ്യാപനം പ്രതീക്ഷാവാഹമാണ്. സംസ്ഥാന അഡ്മിനിസ്ട്രേറ്റീവ് ട്രൈബ്യൂണൽ സ്ഥാപിക്കുന്നതിന് സർക്കാർ എടുത്ത നടപടികൾ അഭിനന്ദനാർഹം തന്നെ 'ഇൻസൈറ്റ്' കൂടുതൽ ജനകീയമാക്കാൻ ഏവരുടേയും സഹായം അഭ്യർത്ഥിച്ചുകൊണ്ട് നിർത്തുന്നു

സ്നേഹാദരങ്ങളോടെ

ബി. രാമചന്ദ്രൻ
(എഡിറ്റർ)

PRESIDENT'S VOICE

വിടവാങ്ങുകയാണ്; ഗവണ്മെന്റ് സെക്രട്ടറിയേറ്റ് അസോസിയേഷന്റെ എളിയ പ്രവർത്തകയായി, പിന്നീട് സംസ്ഥാനകമ്മിറ്റി അംഗമായും, ജോ സെക്രട്ടറിയായും, ട്രഷററായും പ്രസിഡന്റായും പ്രവർത്തിക്കുവാൻ കഴിഞ്ഞതിൽ ചാരിതാർത്ഥ്യമുണ്ട് ഈ സംഘടനയുടെ വളർച്ചയുടെ സുപ്രധാനമായ നാളുകളിൽ നിങ്ങൾ എന്നിൽ അർപ്പിച്ച വിശ്വാസം, നിങ്ങൾ എന്നെ ഏൽപ്പിച്ച ഉത്തരവാദിത്വം മനസാക്ഷിക്കനുസരണമായി ചെയ്തു എന്നതിൽ അറിമാനമുണ്ട് സംഘടനയുടെ നിലനിൽപ്പിനെ തന്നെ ചോദ്യം ചെയ്യുന്ന ഒരു കാലഘട്ടത്തിൽ വെല്ലുവിളികളെ നേരിടാനും, സത്യസന്ധമായും, നീതിപൂർവ്വകവും നിഷ്പക്ഷവുമായി പ്രവർത്തിക്കുവാൻ കഴിഞ്ഞിട്ടുണ്ട്

ഒരു സീനിയർ കടന്നു ചെല്ലുവാൻ കഴിയുന്ന മേഖലയിൽ കൈ കടന്നു ചെല്ലുവാനും പ്രശ്നങ്ങളെ സഭയെല്ലാം നേരിടുവാനും സഹപ്രവർത്തകർ നൽകിയ കലവറയില്ലാത്ത പിൻതുണ എന്നിക്കെന്നും പ്രചോദനമായിരുന്നു

എന്നിരുന്നാലും തസ്തിക പുനർനാമകരണം സാധ്യമാക്കാനുള്ള ശ്രമങ്ങൾ അവസാനിപ്പിച്ച് പരാജയപ്പെട്ടതിൽ വേദിക്കുന്നു ദീർഘനാളത്തെ നമ്മുടെ ശ്രമമാണ് സർക്കാർ തലത്തിൽ പരാജയപ്പെടുത്തിയിരിക്കുന്നത്

സർക്കാർ തലത്തിലും, മറ്റ് മേഖലകളിലും ഗവണ്മെന്റ് സെക്രട്ടറിയേറ്റ് അസോസിയേഷൻ അറിവാലും തന്നെ നിങ്ങൾ ഓരോരുത്തരും നൽകിയ പിൻതുണയ്ക്ക് നന്ദി രേഖപ്പെടുത്തുന്നു.

സംഘടനയെ ശക്തിപ്പെടുത്തുവാൻ നിങ്ങൾ ഓരോരുത്തരും സഹകരിക്കുമെന്ന പ്രതീക്ഷയോടെ,

വിശ്വാസപൂർവ്വം

സുസൻ മലയിൽ
(പ്രസിഡന്റ്)

FROM SECRETARY'S DESK

ഒരു വർഷം കൂടി പിന്നിടുകയാണ് സംഘടനയുടെ അക്കൗണ്ടിൽ ഇക്കാര്യം നഷ്ടങ്ങൾ മാത്രം സംസ്ഥാന പ്രസിഡന്റായ ശ്രീമതി സുസൻ മലയിലിന്റെ വിരമിക്കൽ, തസ്തിക പുനർനാമകരണം ചെയ്യാൻ നടത്തിയ ശ്രമങ്ങൾ പരാജയപ്പെടുത്തിയത് എന്നിവ

കേരളത്തിലെ സെക്രട്ടറിയേറ്റുകളുടെ ശക്തികൾ സെക്രട്ടറിയേറ്റുകൾ തന്നെയാണ് എന്ന് ഒരിക്കൽ കൂടി Designation Change ന്റെ തെളിയിച്ചു കാൽക്കൊരിന്റെ ബാധ്യതയില്ലാത്ത ഒരു തീരുമാനം ഇപ്പോൾ ആവശ്യമില്ല എന്ന സർക്കാർ നിലപാട് അപഹാസ്യമാണ് തസ്തിക പുനർ നാമകരണം ചെയ്യാനുള്ള ശ്രമങ്ങൾ ഇനിയും ഉണ്ടാകും അത് എങ്ങനെ ആവണം എന്നത് സംസ്ഥാനസമ്മേളനത്തിൽ ചർച്ച ചെയ്ത് തീരുമാനിക്കേണ്ടതാണ്

സ്ഥലംമാറ്റത്തിലെ അഴിമതിക്കെതിരെയും, അന്ധികൃത പ്രവർത്തന ക്രമീകരണത്തിന് എതിരെയും സംഘടന നടത്തുന്ന ചെറുതത് നിൽപ്പ് അതിന്റെ പാരമ്യത്തിലാണ്. കാസർഗോഡ്, വയനാട്, ഇടുക്കി, കണ്ണൂർ, മലപ്പുറം, പാലക്കാട് എന്നീ ജില്ലകളിലെ ഒഴിവുകൾ നികത്തുന്നതിന് നടപടികൾ പുരോഗമിച്ച് വരുന്നു കഴിഞ്ഞ ഡിസംബറിൽ നടത്തുവാൻ തീരുമാനിച്ച എംപ്ലോയ്മെന്റ് വഴിയുള്ള നിയമനം അവസാന ഘട്ടത്തിലാണ്

മെഡിക്കൽ കോളേജ് ബൈഫർക്കേഷന്റെ ഓപ്പഷൻ നൽകുന്നതിനുള്ള നടപടികൾ പുരോഗമിച്ച് വരുന്നു മെഡിക്കൽ കോളേജ് സർവ്വീസിലേക്ക് പോകാൻ താൽപ്പര്യമുള്ളവർ ഓപ്പഷൻ നൽകേണ്ടതാണ്

കേരളത്തിലെ അംഗീകൃത സ്ഥാപനങ്ങളിലെ സെക്രട്ടറിയേറ്റി വിവാർത്തികളെയും, ക്യാളിഫൈഡ് ആയവരെയും സംഘടിപ്പിച്ച് കേരള സെക്രട്ടറിയേറ്റി ക്ലബ്ബായി സഹകരിച്ച് നവംബർ 2 ന് കോഴിക്കോട് നടത്തിയ സെക്രട്ടറിയേറ്റി സെക്രട്ടറിയേറ്റുകളുടെ പങ്കാളിത്തം കൊണ്ട് നവ്യാനുഭവമായിരുന്നു

ക്യാമ്പ് കോ-ഓർഡിനേറ്റർ, സീനിയർ ഗ്രേഡ്, ഗ്രേഡ് 1, പ്രൊഫഷണലുകൾ നടത്തുന്നതിന് ബന്ധപ്പെട്ടവർക്ക് നിലവണം നൽകിയിട്ടുണ്ട് നടപടികൾ പുരോഗമിച്ച് വരുന്നു

ഇൻസർവ്വന്റ് ട്രെയിനിംഗ് നടക്കാത്ത ജില്ലകളിൽ സംസ്ഥാന കമ്മിറ്റി അംഗങ്ങൾ ഇടപ്പെട്ട് ട്രെയിനിംഗ് നടപടി സ്വീകരിക്കേണ്ടതാണ് അതിന് ആവശ്യമായ സഹായം സംസ്ഥാനകമ്മിറ്റി നൽകുന്നതാണ്.

കേരളത്തിലെ സർക്കാർ മേഖലയിലെ സെക്രട്ടറിയേറ്റുകളുടെ ആവശ്യങ്ങൾക്കായി പ്രവർത്തിക്കുന്ന സംഘടനയാണ് ഗവണ്മെന്റ് സെക്രട്ടറിയേറ്റ് അസോസിയേഷൻ എന്ന് ചിലരെങ്കിലും അംഗീകരിച്ചതിൽ നന്ദിയുണ്ട് ഗവണ്മെന്റ് സെക്രട്ടറിയേറ്റ് അസോസിയേഷന്റെ നയങ്ങളെയും നിലപാടുകളെയും എന്നായാലും അംഗീകരിക്കേണ്ടിവരും കലവറയില്ലാത്ത നിങ്ങൾ ഓരോരുത്തരും നൽകിപ്പോരുന്ന പിൻതുണയാണ് ഈ സംഘടനയുടെ ശക്തി എന്ന് ഓർമ്മിക്കട്ടെ

വിശ്വാസപൂർവ്വം

ആർ. രാജേഷ്
ജന: സെക്രട്ടറി



For Dry Eye Sufferers, Lots of Tears Bring Major Relief

ARUN RJ

THQH ponnani, (Courtsey - NYT Science)

For many people over 50, dry eyes are just another sign of aging, no more a nuisance than gray hair or crow's feet. The occasional stinging, redness or gritty feeling in the eye, especially on waking, goes away with a few good blinks.

But for millions, dry eyes are a painful, daily problem. Dr. Debra A. Schaumberg, an assistant professor of medicine at Harvard, who has studied the prevalence of dry eye syndrome among subjects in the Women's Health Study and the Physicians' Health Study, estimates that as many as nine million Americans, most of them women, have moderate to severe dry eye.

The discomfort ranges from a mild burning, like having soap in your eye, to a persistent sense of scraping under the lids. Extreme dryness can lead to infection. And it can impair the way the eye refracts light, blurring vision and making it hard to read, work at a computer or drive.

"It's like having sand in your eye all the time," said Charlotte Chapman Cope, a health care

administrator at the Methodist Hospital in Houston, whose left eye is very dry because of a damaged cornea. "And then each time your eye closes it's like a windshield wiper going over that sand and grinding it in."

Doctors have no cure, only temporary treatments - mainly with artificial teardrops. But in recent years they have learned more about how dry eye occurs, in particular major role played by inflammation.

In most cases, the disorder has multiple causes - as diverse as menopausal changes and daylong work at computer screens. Knowing which ones are at work, doctors say, is the key to finding the best treatment.

The wet film on the eye's surface is not simple salt water, but a three layered, gel-like concoction of mucous, water, fat and a variety of proteins.

Immune system molecules are in the mix, fighting inflammation and infection. And growth factors help quickly heal any injury the eye might suffer.

INSIGHT Dec'08

“The cornea is one of the fastest healing tissues in the body,” said Dr. Stephen C. Pflugfelder, a professor of ophthalmology at Baylor. “If you were to your eye now, it would heal overnight.”

Tears naturally evaporate when the eye is open, faster in conditions of wind or low humidity. Nerves on the surface then signal the glands to put out more tears, and blinking spreads the mixture around.

Various things can keep this system from working properly. Surface inflammation - from allergies, contact lenses or injury, for example - interrupts the nerve signal to the tear glands.

“Inflammation renders the surface of the eye numb, so you get decreased tear production,” said Dr. J. Daniel Nelson, a professor of ophthalmology at the University of Minnesota.

Age can bring about a gradual decline in the amount of tears made. “When you get older, you dry up,” said Dr. Esen Karamursel Akpek, the director of the dry eye clinic at the Wilmer Eye Institute at Johns Hopkins.

Some medicines - including blood pressure and heart treatments, antihistamines, decongestants, pain relievers and antidepressants - can also dry the eyes.

The balance of male and female sex hormones plays a role, and they help explain why in people over 50, dry eye is twice as prevalent in women as in men. Estrogen appears to promote inflammation of the eye surface, while androgens (the male sex hormones) work against it.

“Research has shown that androgen hormones have anti-inflammatory effects, and they’re important in maintaining the lacrimal glands,” Dr. Pflugfelder said, referring to the glands that make watery tears.

In middle age, both men and women experience a decline in androgens, but women end up with significantly lower levels than men have.

Over the counter artificial tears typically cost \$10 to \$30 a month. If drops are needed four or more times a day, doctors recommend that patients use the drops without preservatives.

Some drops are not simple salt water, but more viscous gels and ointments. These last longer but they blur vision and are usually used at night.

Some kinds of artificial tears claim to help build the mucous layer and thus improve the quality of the tear film. Two brands - Refresh Endura and Soothe - contain oils that are supposed to help replenish the top layer of tears.

Restasis, a brand of drops available by prescription only (about \$75 to \$100 for a month's supply), contains cyclosporine, which treats inflammation. Some patients find that these drops sting.

Another way to treat dry eye is to plug up the ducts that drain tears from the eyes in to the nasal cavity.

In some patients, the oil producing glands behind the eyelashes need to be cleared of debris. Patients are then advised to keep them clean by washing the eyelids and lashes with baby shampoo.

Some physicians recommended that patient consume more foods with beneficial omega-3 and omega-6 fatty acids, cold-water fish and flaxseed oil, for example - or taking supplements to try to improve the quality of oily tears.

Although this nutritional strategy has not been shown to work for all patients, many report that it makes a difference.

Other strategies against dry eye include avoiding cigarette smoke, dust and very dry air and wearing sunglasses outdoors. Dr. Nelson of Minnesota recommends the kind of motorcycle tight fitting glasses to keep out the wind.

Some sufferers also find it helps to lower their computer screens so their eyes do not stay open so wide, and there is less tear evaporation.

Doctors also tell computer users to deliberately look away from the screen from time to time and remind themselves to do more of what comes naturally: blink.

പാലോട് - പുതിയ തസ്തിക തീരുമാനമായില്ല

പാലോട് പ്രാഥമികാരോഗ്യകേന്ദ്രത്തിൽ ഫെർട്ടിലൈറ്റ് അസിസ്റ്റൻസിന്റെ പുതിയ തസ്തിക സൃഷ്ടിച്ചു എന്ന പ്രഖ്യാപനത്തിൽ അടിസ്ഥാനമായി ഇവിടെ പുതിയ തസ്തിക സൃഷ്ടിക്കണമെന്ന് മെഡിക്കൽ ഓഫീസർ നൽകിയ ശുപാർശ ആരോഗ്യ വകുപ്പ് ഡയറക്ടർ സർക്കാരിന് സമർപ്പിച്ചു. ധനകാര്യവകുപ്പ് ഈ ഫയലിൽ മേൽ ചില ചോദ്യങ്ങൾ ഉന്നയിച്ച് ഫയൽ ആരോഗ്യവകുപ്പിലേക്ക് മടക്കി ഇത് സംബന്ധിച്ചുള്ള മറുപടി പാലോട് പ്രാഥമികാരോഗ്യകേന്ദ്രം മെഡിക്കൽ ഓഫീസർ വീണ്ടും നൽകിയിട്ടേയുള്ളൂ. ഈ ഫയൽ സർക്കാരിൽ വീണ്ടും പോയി ധനവകുപ്പിന്റെ അംഗീകാരം ലഭിച്ചെങ്കിൽ മാത്രമേ പുതിയ തസ്തിക സൃഷ്ടിക്കപ്പെടുകയുള്ളൂ. തിരുവനന്തപുരം ജില്ലയിലെ പാലോട് പ്രധാന താലൂക്ക് ആശുപത്രിയിൽ ഫെർട്ടിലൈറ്റ് അസിസ്റ്റൻസി തസ്തിക സൃഷ്ടിക്കപ്പെട്ടിട്ടില്ല. പേരൂർക്കട ജില്ലാ ആശുപത്രിയിലും, തിരുവനന്തപുരം ജനറൽ ആശുപത്രിയിലും ഓരോ അധിക തസ്തിക കൂടി അനുവദിക്കണമെന്നാണ് ഇതിനൊന്നും നടപടി സ്വീകരിക്കാത്ത അധികാരികളുടെ നടപടി പ്രതിഷേധാർഹമാണ്.

INTRAOCCULAR LENSES (IOLs): NEW ADVANCES INCLUDING AcryS OF ReStor, REZOOM & CRYSTALENS

ARUN RJ
THQH Ponnani

Intraocular Lenses, or IOLs, are the artificial lenses that replace the eye's natural lens that is removed during cataract surgery. IOLs have been around since the mid 1960s, though the first FDA approval for one occurred in 1981. Before that, if you had cataracts removed, you had to wear very thick eyeglasses or special contact lenses in order to see afterward, since the natural lens that had been removed wasn't replaced with anything.

Good vision after cataract surgery was an important consideration, but now that new IOLs have been introduced that solve more vision problems than ever, cataract surgeons have more to consider before choosing IOLs for their patients' visual needs.

Multifocal IOLs and Accommodating

IOLs: AcrySof ReStor, ReZoom and Crystallens

Traditional IOLs are monofocal, meaning they offer vision at one distance only (far, intermediate or near). They are

definitely an improvement over the cataractous lens that is replaced during surgery, which provides only cloudy, blurred vision at any distance. But traditional IOLs mean that the patient must wear eyeglasses or contact lenses in order to read, use a computer or view objects in the middle distance, especially if you are already experiencing presbyopia before cataract surgery.

The new multifocal and accommodating IOLs offer the possibility of seeing well at more than one distance without glasses or contacts. Here are a few examples.

AcrySof ReStor (Alcon)

AcrySof ReStor uses apodized diffractive technology - a design that responds to how wide or small the eye's pupile might be - to provide near, intermediate and distance vision. In early 2007, an aspheric version of the AcrySof ReStor received FDA approval. Aspheric lenses, because they are somewhat flat near

the edges, are thought to improve contrast sensitivity and provide better night vision than other types of multifocal IOLs.

Clinical studies used to support the march 2005 FDA approval showed that 80 percent of people who recieved the lens didn't use glasses for any activities after their cataract surgery, 84 percent who recieved the lens in both eyes had distance vision of 6/9 or better, with near vision of 6/12 or better.

ReZoom (Advanced medical Optics)

Rezoom is a multifocal refractive IOL that distributes light over five optical zones to provide near intermediate and distance vision. The first version of this mutifocal IOL was brought to the U.S. market in the late 1990s; the ReZoom is the second-generation version and was FDA-approved in march 2005

In a European study of 215 patients, 93 percent of ReZoom recipients reported never or only occasionally needing glasses.

Crystalens (Bausch & Lomb)

Crystalens gained FDA approval in late 2003, when the IOL was marketed by eyeonics. Bausch & Lomb acquired Crystalens in early 2008, and a newer

version of the IOL, known as Crystalens HD, was FDA -approved in late june 2008. Crystalens was designed to restore the eye's accommodation ability, which isgradually reduced as presbyopia progresses. In FDA studies, about 80 pencent of people who recieved the Crystalens HD could see at J2 better (near vision equivalent of 6/6) after four months-superior to standard IOLs, As with multifocal IOLs, distance vision with the Crystalens tends to be very good.

"Accommodation" is the ability of the eyes to change focus from near to far, far to near and all distances in between. With presbyopia, which usually begins at around age 40, the eye muscle that accom plishes this accommodation - the ciliary muscle - has more difficulty in doing its job, because the eye's lens is becoming less flexible. The ciliary muscle contracts in its effort to move the lens forward, bending it slightly for closeup focusing; but the lens resists because it is not as flexible as it was when the eye was younger.

Since Crystalens has hinges on both sides of the IOL, it can be moved more easily by the ciliary muscle, allowing the eye to focus more naturally at a greater range of



Toric IOLs for Astigmatism

Toric IOLs are designed to correct astigmatism. The **staar Surgical Intraocular Lens** was the first toric IOL available in the United States; it was FDA-approved in 1998. The **staar** toric IOL comes in a full range of distance vision powers, in two versions: one corrects up to 2.00 diopters and the other corrects up to 3.50 diopters of astigmatism. The FDA approved the **Acry Toric IOL by Alcon** in September 2005.

Most surgeons who treat astigmatism in their cataract patients tend to use astigmatic keratotomy (AK) or limbal relaxing incisions, which involve making incisions in the cornea. But in addition to or even instead of corneal astigmatism, some people may have lenticular astigmatism, caused by irregularity in the shape of the natural lens capsule. This can be corrected with a toric IOL. Risks include poor vision due to the lens rotating out of position, with the possibility of further surgery to reposition or replace the IOL.

Aspheric IOLs

Traditional IOLs are spherical, meaning the front surface is curved. Aspheric IOLs, first launched by Bausch & Lomb in 2004, are slightly flatter in the periphery and

are designed to provide better contrast sensitivity. The Bausch & Lomb offering is called the **SofPort Advanced Optics IOL**. Aspheric IOLs are available also from Alcon, including the **AcrySof SN60WF** that includes the blue light blocking feature discussed below and the aspheric version of **AcrySof ReStor**. Advanced Medical Optics offers the **Tecnis Z9000**.

There is some debate as to how long this contrast sensitivity benefit can last in older patients. After the period of cloudy, blurred vision that most cataract patients must endure before their surgery, improved contrast sensitivity is indeed a blessing. But since the ganglion cells of the retina are a major determinant of contrast sensitivity and we gradually lose these cells as we age, over time the contrast sensitivity will decrease as well. However, younger people are undergoing cataract surgery now, and this group is likely to have more and healthier ganglion cells. So they would be able to enjoy the better contrast sensitivity for a longer time.

In May 2004, the **Tecnis Z9000** aspheric IOL received FDA approval for new labeling that says it can reduce postoperative

Vision Terms

TERMS	DEFINITION
Aphakia	Absence of lens in the eye
Bullous Keratopathy	Corneal oedema due to endothelial damage
Cataract	An opacity in the crystalline lens of the eye
Corneal Opacity	Nebula, macula, leucoma in optical axis or peripheral
Glaucoma	Rise of intraocular pressure more than 22 mm
Hyphaema	Blood in anterior chamber
Inaccurate Prescription	Check power of glasses on Lensometer
Image Distortion	Mires distorted on Lensometer
Infection	Infective uveities, endophthalmitis, corneal Ulcer, infected suture
Iris Prolapse	Incarceration of iris in the section or prolapse of iris at the limbus
IOL Displacement	Sunset or Sunrise phenomenon, pupillary capture
Macular Disease	Cystoid macular oedema, ARMD, macular scar/hole or any other macular pathology
Optic Atrophy	Primary, glaucomatous, secondary, consecutive atrophy of optic nerve
Poor Optical Resolution	Mires appear hazy on Lensometer
Posterior Capsular Opacification	Posterior Capsular Proliferation of capsular epithelium leading to thickening of posterior capsule is seen in slit lamp and distant direct.

Rent/Zonular Rupture	Break in the posterior capsule, rupture of zonules
Pseudophakia	Intraocular lens in the eye
Retinal Disease	Retinopathies, Retinal Detachment, Pigment Dystrophies, Retinitis (healed or active), retinal regeneration
Uveitis	Active, healed, anterior, posterior, intermediate macular involvement
Vitreous Disturbance	Rupture of anterior vitreous face; vitreous in anterior chamber, Vitreous incarceration in the section
Vitreous haemorrhage	Blood in vitreous body
Hypermetropia	Hypermetropia is a refractive error where light rays coming from an object falls behind the retina
Myopia	It is an error of refraction in which the parallel rays of light from infinity come to focus in front of retina when accomdation is at rest.
Astigmatism	It is an error of refraction in which the parallel rays of light from infinity cannot converge to a point focus due to unequal refraction in different meridians of the eye
Presbyopia	This is not an error of refraction but as the age advances after sometime the lens get harder and sets in an unaccomodated form. The loss of accomodation is not considered abnormal but proceeds throught the whole life

THE AGING EYE

The eye is shaped like a ball. The pupil, close to the front, allows light to enter the eye. Just behind the pupil is the lens, which focuses the light on the retina at the back of the eye. The retina converts the light into images, and sends them to the brain. The macula is a small area at the centre of the retina that is responsible for what we see straight in front of us, allowing us to see fine detail for activities like reading and writing, and our ability to see colour.

Sometimes the delicate cells of the macula become damaged and stop working due to many different conditions. If it occurs late in life, it's called "age related macular degeneration" or AMD.

Broadly speaking, there are two types of AMD. Usually referred to as "wet" and "dry". This is not a description of what the eye feels like but what the ophthalmologist can see when looking at the macula. "Dry" AMD, the most common form, develops very slowly causing gradual loss of central vision. There is no medical treatment for this type. However,

aids such as magnifiers can be helpful with reading and other small detailed tasks.

"Wet" AMD results in new blood vessels growing behind the retina causing bleeding and scarring, which can lead to sight loss. "Wet" AMD can develop quickly and sometimes responds to treatment in the early stages.

Both kinds usually involve both eyes, although one may be affected long before the other. This may make the condition difficult to notice at first because the sight in the "good" eye compensates for the loss of sight in the affected eye.

The good news is that AMD is not painful, and almost never leads to total blindness because only the central vision is affected. This means that almost everyone with AMD will have enough side (or peripheral) vision to get around and keep his or her independence.

Blurred vision

In the early stages, central vision may be blurred or distorted. This may happen quickly

or develop over several months. The patient may be very sensitive to light or actually see lights, shapes and colours that are not there. This may cause occasional discomfort.

Because AMD affects the centre of the retina, people with the advanced condition will often, notice a blank patch or dark spot in the centre of their sight. This makes reading, writing and recognising small objects or faces very difficult.

If you suspect that you may have AMD see an eye specialist. First, there will be an assessment of vision in both eyes. Then the eye will be dilated so that the eye specialist can look in to your eye. If you are diagnosed with AMD, you will receive an Amsler grid, which helps you to keep track of any minor change in your vision on a daily basis, a sign of wet AMD. This quick test works best for people who still have good central vision.

In some cases fluorescein angiogram will also be needed. This involves taking a rapid series of photographs of your retina with bright flashes of blue light. These photographs give an accurate map of the changes occurring in the macula and help your eye specialist to decide on the best treatment.

If you have “wet” AMD affecting the middle of the macula, in some cases, Photodynamic therapy (PDT) or the Visudyne therapy is possible. This involves infusing a light sensitive drug through your bloodstream to identify the new blood vessels growing in the wrong place behind the retina. A “cold laser” is then shone in to the eye to activate the drug thus destroying the new blood vessels preventing them from causing too much damage. This can help stop the “wet” AMD progressing to its worst stages though more than one treatment may be needed.

The second option is Laser Photocoagulation. While this process cannot restore vision, it seals leaky blood vessels and inhibits their growth in selected cases. This prevents further vision deterioration in a small percentage of patients. Laser provides a concentrated beam of high energy light, resulting in scar formation in the area treated. This creates a permanent blind spot in the field of vision. However this loss of vision is usually less severe than the eventual vision loss if the disease is left untreated.

New treatment

Newer treatments for “wet” macular degeneration are being developed. Anti VEGF



(anti-Vascular Endothelial Growth Factor) therapies are the next groups of treatments. They involve an injection in to the eye that stops the development of the new leakly blood vessels. The injections have to be repeated on a monthly or bi-monthly basis.

Like PDT it is limited to people whose “wet AMD” affects the middle of the macula and its main aim is to stop it from getting worse. However, in some cases, it has been shown to restore some of the vision already lost and it can help with a wider range of people than PDT.

At the moment there isn't any medical treatment for “dry” AMD. Some research suggests that vittamin supplements can help slow the progression. Studies have shown that a combination of high - dose beta-carotene, vitamin C, vitamin E, and Zinc can reduce the risk of developing advanced AMD by about 25 percent in those patients who have earlier but significant forms of the disease. This is the only proven intervention to decrease the risk of advanced AMD at this time. They do not restore sight, but may have a preventative role.

A natural reaction to being diagnosed with AMD is to feel upset or worried about the future. Adjusting to any major change in life can

feel difficult, so you may need some support especially at first. If you would like to talk things over with someone outside your circle of friends or family your family doctor may be able to help you find a counsellor.

The Macular Disease Society (<http://www.maculardisease.org>) has local groups and a telephone counselling service. Talking about and sharing experiences can be a good way of learning to cope with feelings and problems that other people with the same condition may also have come across before.

Don't be discouraged. You can be helped make the best use of your remaining sight. This means learning to use your side (or peripheral) vision. Low vision services can help find the best magnifiers for you and give advice and training on the many ways, often quite simple, in which you can make the most of your remaining sight. Ask your eye specialist, optometrists or GP about a low vision service near by.

(Courtesy The Hindu Sunday Magazine)

INSIGHT Dec'08

PHOTOPHTHALMIA AS A MASS CASUALTY

SUJATHA. P.V.

OPH. ASST.

THQH - KODUNGALLUR

We have had an opportunity to deal with a mass causality at THQ Hospital Kodungallur, in the Dept. of Ophthalmology on 9th June 2008. About 100 patients attended the hospital seeking treatment for photophthalmia, following exposure to high intensity light from a broken metal haloid lamp.

The incident occurred during the inaugural function of a library building at Panangad near kodungallur. The function was noteworthy with the presence of speaker, MP's, MLA's and other leaders of the local bodies and the public were gathered in a small limited area.

A broken metal haloid lamp of 400w and a few halogen lamps of lesser intensity were used in the function. Metal haloid lamps are high intensity discharge lamps that produce light by passing an electric arc through a mixture of Argon, Mercury and other halide compounds kept under high pressure in compact arc tubes. Powerful Ultra Violet rays of various wavelengths emit through these lamps.

Most of the patients were complaining of extreme burning pain, profuse lacrimation, photophobia, swollen eye lids and hazy vision. Since there is a latent period of 4-5 hours between the exposure and the onset of symptoms, Most of them did not know what had happened and they have to sought treatment across the state.

On examination these patients have diminished vision up to 6/24 and there is corneal oedema and desquamation of the epithelial cells. Cornea oedema is due to accumulation of fluid between cells, especially basal cells and between the lamella and around the nerve fibers of the stroma. This produces haziness throughout the entire cornea and alterations in the refractive conditions.

Treatment consists of wearing patches over the eyes closed after applying antibiotic solutions. The vision usually comes back in 18 hours and the cornea regenerates after 24-48 hours.

The DMO (H) Thrissur has managed to sent the District Mobile Ophthalmic team to Kodungallur to help the patients. Two Ophthalmologists from MCH Thrissur also pressed in to service. A special ward was set up at the hospital and a control room opened. Conveyance facility was arranged to pick up the patient from the incident area to the hospital and made them aware of seeking early treatment. A follow up camp also was conducted on the next day at the incident place to review the progress of the patients.

Ultra Violet Light

The name means beyond violet, violet being the colour of shortest wavelength of visible light. It is electromagnetic radiation with a wavelength shorter than that of visible light, but longer than X-rays. 400-800 nm is the visible light and above 800nm is the Infra Red.

The electromagnetic spectrum of UV light can be divided in to 3 ranges as UVA wavelength ranging from 400nm - 315nm, UVB having wavelength ranging from 315nm - 280nm and UVC with wavelength 280-100nm. UVC is absorbed in the atmosphere.

The effects of UV light on the eye. The UVA radiation has lower energy but

penetrates deeps and UVB has higher energy and is more damaging. UVA is absorbed by the lens and UVB by cornea

The UV radiation can cause numerous ocular problems, especially in younger people. In adults most of the UVR is absorbed by the anterior structures of the eye, although some of it does reaches the light sensitive retina. Chronic exposure of UVR can contribute to the development of age-related disorders such as cataract, pterygium and macular degenerations. Indeed acute over exposure also can lead to permanent or temporary blindness. But infants and children below 10 years may be at increased risks for retinal injury because the transmissibility of the lens to damaging visible blue and UV light is greatest during this period. Retinal injury, possibly resulting in loss of sight may be caused by UV radiation in people who have the lens of the eye removed.

Photo keratitis is essentially a reversible corneal burn resulting from excessive UV exposure.

Changes of UV exposure

The UV rays is found typically as part of the radiation received by the earth from the sun. The intensity of UV light depends upon the sun's

position, Cloud movements, altitudes, ozone data and other factors.

Sun and snow is an ideal combination for getting snow blindness. Snow is an outstanding UVR reflector, and the combination of direct and reflected sunlight is a double whammy for unprotected eyes. For surfers, reflected light from the water can have the same effect.

Welding arcs give off radiation over a broad range of wavelengths from 200nm to 1400nm. This includes UV radiation (200 to 400 nm), Visible light (400 to 700nm) infrared radiation (700 to 1400nm). There is direct radiation as well as radiation that is reflected from metal surfaces. The visible light from welding process is very bright and can overwhelm the ability of the iris of the eyes to close sufficiently and rapidly enough to limit the

brightness of the light reaching the retina.

Malfunctioning high intensity mercury vapour lamps with broken glass envelope have been sources of high doses of UVR. It rarely caused by exposure to enclosed arc lights since the glass globe absorbs the most deleterious rays. While affected by the above instances the amount of time required to cause symptoms depends upon several factors such as intensity of radiation, the distance from the source, the angle at which the radiation entering the eye and the type of protection the by stander is using. Prophylaxis consists in wearing of dark glasses when such exposure is to be anticipated, which should practically reduce all the infrared and ultra violet radiation to safe levels providing optimal protection.

പ്രൊജോഷനുകളിൽ പ്രതിസന്ധി അസോസിയേഷൻ നിവേദനം സമർപ്പിച്ചു

മില്ലാ ക്വാമ്പ് കോ- ഓർഡിനേറ്റർമാരുടെ 2 ഒഴിവുകളിലേക്കും 27.10.2007 മുതൽ ഒഴിഞ്ഞുകൊടുക്കുന്ന 4 Sr. Gr; 4 GrI തസ്തികകളിലേക്കും നാളിതുവരെ പ്രൊജോഷൻ നടവിലാക്കിയിട്ടില്ല. റാങ്ക് നമ്പർ 134 മുതൽ 137 വരെയുള്ളവർക്ക് Sr. Gr. പ്രൊജോഷനും, 2003 ലെ സീനിയോറിറ്റി ലിസ്റ്റിലെ റാങ്ക് നമ്പർ 60-63 വരെ Gr I പ്രൊജോഷനും ലഭിക്കേണ്ടതാണ്.

നേരത്തെ അവസാനമായി പ്രൊജോഷൻ നടത്തുന്നതിന് ആരോഗ്യ വകുപ്പ് മൂന്നിടങ്ങളിലെ അറ്റാലിയിൽ വരെ പോകേണ്ടതായി വന്നു കഴിഞ്ഞ ഒരു വർഷമായി ഒഴിഞ്ഞുകൊടുക്കുന്ന പ്രൊജോഷൻ നടപ്പിൽ വരുത്തുന്നതിന് ആരോഗ്യവകുപ്പ് ഡയറക്ടർക്ക് നിവേദനം നൽകി. ഒരു മാസത്തിനകം നടപടി ഉണ്ടാകുമെന്ന് ഉറപ്പ് നൽകിയിട്ടുണ്ട്.

Age Related Macular Degeneration (ARMD)

Reasearched by R. BINOY

CHC - ANCHAL

Are you experiencing blurring or a blue spot at the centre of your field of vision?

The macula is a small area in the centre of the retina that is responsible for sharp, detailed central vision. Macular degeneration results in a gradual distortion of central vision and some times leads to a central blind spot called scotoma. When central vision is impaired, you may have difficulty recognizing faces and colours, driving a car, reading print, or doing close hand work such as sewing or other handcrafts.

There are two types of macular degeneration the dry or atrophic type and the wet or haemorrhagic type.

Dry ARMD: is the more common form and less severe. It is caused by the deterioration of the tissue of the macula. Yellowish deposits called drusen form under the macula, causing it to thin and dry out. Although there is no treatment for dry macular degeneration, study shows that multi vitamins and minerals can possibly delay the progress of ARMD.

Wet ARMD cause rapid growth of small blood vessels beneath retina. Affected blood vessels leak blood and fluid which form scar tissue that causes vision loss. It can be treated with laser surgery, photodynamic therapy and injections in the eye which can slow the rate of vision loss.

ARMD is a very serious condition but does not result in total blindness. With the help of a vision loss specialist patient can learn to use his side vision to read, perform other tasks usually performed by the central part of the eye.

Signs of ARMD

- (1) *Blurry areas on a printed page*
- (2) *Straight lines appear wavy*
- (3) *Dark spaces in the centre of vision*

Amsler Grid ARMD can be detected by a self test using an Amsler grid. The self test is no substitute for regular eye exams.

The pattern of the Amsler grid resembles a check board. Cover one eye and stare at the black dot in the centre of the grid. While staring at the dot you may notice that the straight lines in the pattern appear wavy. You notice that some of the lines are missing. There may be signs of ARMD. Ms Ringgold who wrote a book named 'Out of the Corner of My Eye' had macular degeneration for 10 years. Reading this book by anyone who has the condition of macular degeneration would help them to cope with their condition and also for their family to understand how they can help him.

**2008 നവം. 23 ന് ആശ്രമം ഇ.എസ്.ഐ ആശുപത്രിയിലെ
പെണ്ണാമെട്രിസ്റ്റ് തസ്തികയിലേക്ക് നടത്തിയ എഴുത്ത് പരീക്ഷയുടെ ചോദ്യം**

90 Minutes

1. Sudden painful loss of vision occurs in the following except
 - A) Acute iridocyclitis
 - B) Acute congestive glaucoma
 - C) Optic neuritis
 - D) Central retinal artery occlusion
2. A 50 years old male complaints of head ache and eye strain on reading The most probable refractive error is
 - A) Myopia
 - B) Hypermetropia
 - C) Astigmatism
 - D) Presbyopia
3. Epiphora means
 - A) Excessive lacrimation
 - B) Allergic Conjunctivitis
 - C) Itching of the eyes
 - D) Severe redness of the eyes
4. Thread like discharge is seen in all except
 - A) Gono coccal Conjunctivitis
 - B) Allergic Conjunctivitis
 - C) Tumors of the Conjunctiva
 - D) Spring Catarrh
5. Micropsia and macropsia are seen in
 - A) Acute Congestive glaucoma
 - B) Choroiditis
 - C) Optic neuritis
 - D) Papilloedema
6. Retinal diseases cause
 - A) Blue blindness
 - B) Pink blindness
 - C) Red and green blindness
 - D) Violet and indigo blindness
7. Superficial vessels in the cornea are differentiated from deep vessels by which of the following?
 - A) Limbal crossing
 - B) Bright red color
 - C) Arborescent branching
 - D) All the above
8. Iris Bombe classically occurs in
 - A) Hypermature cataract
 - B) Iridocyclitis
 - C) Aphakia
 - D) Lenticular displacement
9. Hyphema refers to
 - A) Bloody cornea
 - B) Blood in A,C
 - C) Blood in vitreous
 - D) Retinal haemorrhage
10. Which of the following is an earliest indicator of optic nerve disease?
 - A) Loss of light reflex
 - B) Marcus gun pupil
 - C) Argyll Robert Son pupil
 - D) Hippus
11. An objective measure of visual acuity is made by
 - A) Snellen's Chart
 - B) Optokinetic nystagmus
 - C) Photo-stress test
 - D) Amsler's chart

12. The field of vision is maximum in which direction?
 - A) Superior
 - B) Nasal
 - C) Temporal
 - D) Inferior
13. The confrontation test is used to assess
 - A) Visual acuity
 - B) Power of accommodation
 - C) Field of vision
 - D) Night vision
14. Corneal opacities are best studied by
 - A) Keratometer
 - B) Fundoscope
 - C) Slit lamp
 - D) Gonioscope
15. Which of the following vital stains is used to demonstrate corneal ulcer best?
 - A) Rose bengal
 - B) Alcian blue
 - C) Auronaffin
 - D) None of these
16. In which of the following is there a deep anterior chamber?
 - A) Hyper mature cataract
 - B) Aphakia
 - C) Keratitis
 - D) Retinal detachment
17. The field of vision is largest for which color?
 - A) White
 - B) Blue
 - C) Green
 - D) Red
18. Thickness of the cornea is measured by
 - A) Keratometer
 - B) Tonometer
 - C) Pachymeter
 - D) Glucometer
19. In megalo cornea, the diameter of the cornea is greater than
 - A) 10mm
 - B) 11mm
 - C) 12mm
 - D) 13mm
20. Which is not a cause of circum corneal congestion?
 - A) Keratitis
 - B) Uveitis
 - C) Glaucoma
 - D) Retrobulbar haemorrhage
21. Sub conjunctival haemorrhage may be seen in
 - A) Mumps
 - B) Measles
 - C) Pertusis
 - D) Rabies
22. D-shaped pupil is seen in
 - A) Iridocyclitis
 - B) Iridodialysis
 - C) Glaucoma
 - D) Dislocated lens
23. The color of fluorescein staining in corneal ulcer is
 - A) Yellow
 - B) Blue
 - C) Royal blue
 - D) Green
24. Drooping of the upper eye lid is called
 - A) Ectropion
 - B) Entropion
 - C) Ptosis
 - D) Proptosis
25. Hirschberg test is used to detect
 - A) Squint
 - B) Field defects
 - C) Glaucoma
 - D) Optic atrophy

26. Londolt's broken ring test is used for
 A) Knowing the type of squint B) Recording visual acuity
 C) Charting field of vision D) Testing power of ocular muscle
27. Fluorescein staining is most useful in
 A) Bullous keratopathy B) Stromal dystrophies
 C) Corneal vascularisation D) Contact lens fitting
28. Jones test is used to detect
 A) Angle closure glaucoma B) Lens dislocation
 C) Patency of nasolacrimal duct D) Vitreous opacities
29. Color vision is by
 A) Rods B) Cones
 C) Occipital cortex D) Bipolar cells
30. Trichromatic theory of color vision was propounded by
 A) Swan B) Yong-Helmholtz
 C) Muller D) None of the above
31. Antero posterior diameter of the eye ball is
 A) 7mm B) 12mm
 C) 22mm D) 25mm
32. Posterior chamber contains
 A) Acquous humor B) Vitreous humor
 C) Lens D) Iris
33. Eye at birth is having
 A) Myopia B) Hypermetropia
 C) Astigmatism D) Pressbyopia
34. The deep mucous layer of tear film is secreted by
 A) Meibomian glands B) Lacrimal gland
 C) Conjunctival goblet cells D) All the above
35. Refractive power of the cornea is
 A) 18D B) 10D
 C) 40D D) 30D
36. Refractive power of the human lens is
 A) 10D B) 20D
 C) 30D D) 40D
37. Chalazion is a chronic inflammation of
 A) Lacrimal gland B) Sebacious gland
 C) Meibomian gland D) Conjunctival gland
38. Levator palpebrae Superioris is supplied by
 A) III Nerve B) IV Nerve
 C) V Nerve D) VI Nerve
39. Lateral rectus muscle is supplied by
 A) Oculomotor Nerve B) Trochlear Nerve
 C) Abducent Nerve D) Trigeminal Nerve



40. Superior oblique muscle is supplied by
 A) Trigeminal Nerve B) Oculomotor Nerve
 C) Trochlear Nerve D) Sympathetic Nerve
41. Medial Rectus muscle is supplied by
 A) III Nerve B) V Nerve
 C) VI Nerve D) VII Nerve
42. Superior Rectus muscle is supplied by which cranial nerve
 A) Trochlear B) Trigeminal
 C) Oculomotor D) Abducent
43. Inferior oblique muscle is supplied by which cranial nerve
 A) IV cranial nerve B) III cranial nerve
 C) VI cranial nerve D) VII cranial nerve
44. Ptosis is due to weakness of which muscle
 A) Levator Palpebrae Superioris B) Lateral rectus
 C) Superior rectus D) Inferior rectus
45. Lagophthalmos is
 A) Incomplete closure of palpebral fissure B) Absence of eye ball
 C) Protrusion of eye ball D) None of the above
46. Aniridia is
 A) Absence of lens B) Absence of iris
 C) Absence of eye ball D) Absence of eye lashes
47. Loss of eyebrows is seen in
 A) Atopic dermatitis B) Leprosy
 C) Thyroid disease D) Tuberculosis
48. Increased number of eye lashes is referred to as
 A) Trichiasis B) Tylosis
 C) Hyper trichosis D) Madarosis
49. Entropion is
 A) Inturned lids B) Absence of lids
 C) Out turned lids D) Scarring of lids
50. Nasolacrimal duct drains into
 A) Superior meatus of the nose B) Inferior meatus of the nose
 C) Middle meatus of the nose D) Nasal septum
51. Epiphora occurs in
 A) Chronic iritis B) Acute congestive glaucoma
 C) Chronic dacryocystitis D) Trachoma
52. Most common tumor of the lacrimal gland is
 A) Squamous cell carcinoma B) Basal cell carcinoma
 C) Mixed tumor D) Adenoma
53. In DCR, lacrimal sac is communicated with
 A) Superior meatus B) Inferior meatus
 C) Nasal septum D) Middle meatus

68. YAG laser is used in the treatment of
 A) Developmental cataract B) After cataract
 C) Open angle glaucoma D) Retinal detachment
69. The aetiology of complicated cataract is all except
 A) Uveitis B) Conjunctivitis
 C) Retinitis pigmentosa D) Retinal detachment
70. After cataract operation, spectacles are prescribed after
 A) 2 weeks B) 4 weeks
 C) 6 weeks D) 12 weeks
71. Diagnostic criteria for mature cataract include
 A) Pearly white color B) Absent fundal glow
 C) Absent iris shadow D) All the above
72. Night blindness is seen in all the following except
 A) Vit. A deficiency B) Retinitis Pigmentosa
 C) High myopia D) Uveitis
73. Inequality in the size of the pupil is referred to as
 A) Anisocoria B) Acoria
 C) Polycoria D) Corectopia
74. In a patient with III N paralysis, all the muscles will be affected except
 A) Medial rectus B) Superior rectus
 C) Lateral rectus D) Inferior rectus
75. Method of visualisation of the angle of anterior chamber is
 A) Gonioscopy B) Ophthalmoscopy
 C) Keratometry D) Tonometry
76. Identification tonometer is
 A) Schiottz tonometer B) Goldmann tonometer
 C) Perkin's tonometer D) Mackaymarg tonometer
77. A technique for assessing field of vision
 A) Pachymetry B) Perimetry
 C) Tonometry D) Tonography
78. Features of lacrimal sac malignancy include
 A) Mass below medial palpebral ligament B) Bloody epiphora
 C) Filling defect on dacryocystography D) All the above
79. Blind spot is located
 A) Nasally between 10° & 20° B) Temporally between 20° & 40°
 C) Temporally between 10° & 20° D) Nasally between 2° & 40°
80. Nodal point of the eye lies at
 A) Pupil B) Anterior lens capsule
 C) Mid vitreous D) Posterior part of the lens
81. In astigmatism, when the vertical meridian is more curved it is called
 A) With the rule B) Against the rule
 C) Toric astigmatism D) Irregular astigmatism

82. When the refractive powers of the two eyes are different, it is
 A) Emmetropia B) Anisometropia
 C) Ametropia D) Anisocaria
83. The distance between the patient and technician doing retinoscopy should be
 A) 6 meters B) 25 meters
 C) 1 meters D) 12 meters
84. Keratometer is used to measure
 A) Lenticular B) Corneal opacity
 C) Corneal curvature D) Depth of Anterior chamber
85. Telescopic spectacles are used when the visual failure is due to disease of
 A) Cornea B) Retina
 C) Vitreous D) Lens
86. Ophthalmia nodosa is due to
 A) Vegetable matter B) Radiation exposure
 C) Caterpillar hair D) None of the above
87. 'Jack in the box' effect of aphakic eye corrected by spectacles is due to
 A) Spherical aberration B) Ring scotoma
 C) Astigmatism D) Inaccurate correction
88. Extended wear contact lenses are made of
 A) PMMA B) HEMA
 C) EDMA D) PVP
89. Mydriatic used for refraction in children is
 A) Atropine drops B) Atropine ointment
 C) Homatropine D) Eucatropine
90. Treatment of choice for aphakia is
 A) Spectacles B) Contact lens
 C) Posterior chamber IOL D) Anterior chamber IOL
91. Volume of the orbit is
 A) 25cc B) 30cc
 C) 10cc D) 7cc
92. The term enophthalmos means
 A) Absence of eye ball B) Protrusion of eye ball
 C) Retraction of eye ball D) Atrophic bulbi
93. Surgical removal of the eye ball is
 A) Enucleation B) Eviceration
 C) Exenteration D) None of the above
94. Visual acuity of 6/6 is attained by the age of
 A) 1 year B) 2 years
 C) 3 years D) 5 years
95. All extra ocular muscles arise from the common tendinous ring at the apex of the orbit except
 A) Superior oblique B) Superior rectus
 C) Inferior rectus D) Inferior oblique

96. Chin elevation is seen in the case of
 A) Superior oblique palsy B) Superior rectus palsy
 C) Inferior rectus palsy D) Lateral rectus palsy
97. Number of cardinal positions of gaze are
 A) 6 B) 7
 C) 8 D) 9
98. H.P. inclusion bodies are seen in
 A) Vernal catarrh B) Trachoma
 C) Phlycten D) Diabetes
99. All the following conditions produce sub conjunctival haemorrhage except
 A) Blunt trauma B) Whooping cough
 C) Scurvy D) Acute iridocyclitis
100. NPCB was launched in the year
 A) 1997 B) 1976
 C) 1974 D) 1979

Answer Key

1 A	21 C	41 A	61 D	81 A
2 D	22 B	42 C	62 C	82 B
3 A	23 D	43 B	63 C	83 C
4 C	24 C	44 A	64 C	84 C
5 C	25 A	45 A	65 D	85 B
6 C	26 B	46 B	66 D	86 C
7 D	27 B	47 B	67 C	87 B
8 B	28 C	48 C	68 B	88 B
9 B	29 B	49 A	69 B	89 B
10 B	30 B	50 B	70 C	90 A
11 B	31 C	51 C	71 D	91 B
12 C	32 A	52 C	72 D	92 C
13 C	33 B	53 D	73 A	93 B
14 C	34 C	54 B	74 C	94 B
15 A	35 C	55 D	75 A	95 D
16 B	36 B	56 B	76 A	96 B
17 B	37 C	57 B	77 B	97 D
18 C	38 A	58 C	78 D	98 B
19 D	39 C	59 C	79 C	99 D
20 D	40 C	60 A	80 D	100 B

കുർത്തക്കളി പാടലുള്ളും ദർച്ചകളള ദപ്തങ്ങളും
 ക്ഷിപ്രായ്ക്കു ക്ഷീണാവർ കൊടക്കോരമേ
 ത്രേമലാമേ കന്ദളകളിലെ കവിത്തിരി, പടക്കേളയ
 സുവലൊന്നും തുടക്കേണൊന്നൊരമാർമ്മലാവല്ല

(ഓതിത്തീ -)

പച്ചിലങ്ങറി, പടാകു, മാവരും മേലാമവ
 തിയ്യമുള്ള ക്ഷീണത്തിൻ ഉയരപെടമതണം
 കണ്ണിലെ മീപനാളത്തെ ശോണലാതെ കാത്തിടണം
 നാളെക്കളെ വെളിച്ചത്തിൻ തെളിയിക്കുവാൻ

(ഓതിത്തീ -)

കന്ദ്രഭാനം ചെച്ചുനേലായ മരണമടഞ്ഞാലടൻ
 ശോഷണങ്ങളേ കന്ദ്രമൊക്കിൻ ശിഖിമിടണം
 ത്രോമണിക്കുടറിനുള്ളിൽ കൂടക്കണം നഖനേളയ
 കൂടത്താലാ വെന്ദരപ്യേളയ ഒന്നുമെങ്കിലു

(ഓതിത്തീ -)

വിതാവിന്റെ ജീവിതാഭിലാഷം നിറകവറീടണ
 പശുൻ പശുൻമാരികളറ്റം പശുപശുനകളാ
 ഒരവൻ തൻ ജീവിതാഭിലാഷം നിറകവറീടണയാ
 മന്ദേഷം തിൻ നരേഷം പശുലമാകും

(ഓതിത്തീ -)

കന്ദ്രഭാനം മഹാഭാനം കന്ദ്രഭാനം ജീവിത ഭാനം
 ഞെ പശുരും കവരിലും കൃത്തിച്ചീടണം
 ശ്രീനാമി ത്രേശ്യകന്ദ്രാണം ത്രേചരിഷ്ട ഭാരതത്തിൻ
 കന്ദ്രഭാനപശുചരണം കരീമമാമി
 ത്രോസ്ത 25 മേതൻ ക്ഷെപതംബറിൻ കൂടവതെ
 കന്ദ്രഭാന പശുമാമി ത്രേചരിക്കണ
 നന്ദയം ത്രേചരിക്കണ

(ഓതിത്തീ -)

