

GLAUCOMA:

The silent vision killer

By Jacquiline Emodok

Lucy Nansukusa's mother, 58, became blind one year ago. It was a gradual process which Nansukusa's mother thought was a result of old age. However, after noticing that some of her mother's age mates still had their sight, Nansukusa took her for an eye check-up. The doctor diagnosed her with glaucoma.

Glaucoma is the world's second cause of blindness after cataracts. The condition accounts for 12.3% of cases of blindness, while in Uganda, the condition accounts for 3.6% cases of blindness, according to the National Centre for Biotechnology Information.

As a result, last week the Ministry of Health carried out a campaign to raise awareness about the condition and how to prevent it.

According to Mike Laleyo, an optometrist at Mengo Hospital in Kampala, glaucoma is a condition of increased pressure within the eyeball which causes damage to the optic nerve, which causes gradual loss of sight.

"The eye is like a ball of tissue and regularly makes fluid to maintain its ball shape; the fluid circulates in and out of the eye and it is drained. However, there are cases when the fluid may not be drained well and so there will be a build-up. That build-up of fluid will start pushing against the optic nerve and can damage it," Laleyo explains.

The optic nerve is located at the back of one's eye and connects it to the brain; it sends light signals to your brain so that you can see.

"The fluid is produced by what is termed as the ciliary body; the fluid comes through the pupil and is supposed to be drained at the angle in the anterior chamber. However, if there is a problem with too much production or blockage in the drainage, then the fluid will accumulate," explains Dr Juliet Otiiti, a consultant at Georgina Ophthalmic Surgeons and Optical Consultants.

She adds that there are different types of glaucoma. The common types are open angle glaucoma and angle closure glaucoma, which are linked to various risk factors.

Majority of people have open angle glaucoma where the angle is open but the drainage is not draining the fluid well because it has been blocked.

The risk factors for this type of glaucoma include having conditions such as diabetes and high blood pressure.

"The structures in the angle get hardened



Symptoms

In the early stages, glaucoma has no symptoms because one's vision remains normal and there is no pain. However, as the disease progresses, Dr Mahender Kumbala, an optometrist at Eye Care Centre in Kampala, says one's periphery (side view) might begin to fail over a period of 15 months to three years, depending on the pressure.

"It will give one tunnel vision so you will see things like you are looking through a tunnel, but will not be able to see your surroundings," he says.

Otiiti explains that this is because the pressure damages the nerves around the eye and one remains with only a few nerves at the centre of the eye that can be used for vision.

"There are many nerves that exit the eye like the optic nerve which takes images to the brain so as the images come in and you have high pressure

it will kill them. The first nerves to be killed are those serving the periphery and that is why that vision goes first. In the advanced stages (if the condition is left untreated), one may also lose their sight," she says.

Mahender explains that most times one will experience constant eye pain and see halos (bright circles that surround a light source like headlights) around bulbs like when driving at night. "The glare from the oncoming vehicles is one issue, especially when someone is using a high beam but you will start seeing halos around that light," Mahender illustrates.

One may also experience hazy or blurred vision and if one has acute angle closure glaucoma, they will have severe eye and head pain accompanied by nausea or vomiting.

The first nerves to die are those at the periphery

and then the sieve that is supposed to drain the fluid is partially blocked," Otiiti says.

However, since the drainage is not blocked completely, the buildup of fluid is slow and in turn the symptoms will delay to manifest until one undergoes a routine exam.

This type of glaucoma can lead to loss of vision if one delays to go for a checkup.

The other type is angle closure glaucoma which is mainly caused by the anatomy of the eye. That is; the eye is too short, or the lens is too thick and the iris is b the drainage angle.

Otiiti says angle closure glaucoma is common in people who are short sighted due to the narrow distance between the iris and cornea. Here the iris tends to plug itself into the drainage angle based on the opening and closing of the pupil, making it hard for the eye to drain fluid.

Experts explain that the pupil is like a curtain which opens/dilates (when it is dim or dark) and closing/constricts (when it is bright). So when it is opening, the iris might fold and cover the drainage. As a result one will experience pain attacks when the pupil is dilated.

"For example, when one is in a cinema prior to the beginning of the movie and the room is dark, one's pupil will dilate. When that happens, the angle will be closed by your iris then the pressure will suddenly go up and you will experience an attack of pain," Otiiti explains.

"When the pupil constricts the angle opens and the pressure goes down, but sometimes it closes over a long time until someone tells you that they have repeatedly had pain in the eye and when you measure you find the pressure is high and realise that the angle is closed," she adds.

Angle closure glaucoma is usually acute (sudden onset) or chronic (progressive) and painful because the pressure levels of the fluid in the eye are very high.

One can also suffer from drug-induced glaucoma caused by a person's reaction to steroid bought off counter; the reaction can cause one's eye pressure to rise for about four months before it normalises.

There is also secondary glaucoma caused by tumours, blood clots, injury to the eye such as boxing or accidents that affect the eye or after surgery.

Continued on page 26

HEALTH VIEW POINT



Lillian Namusoke Magezi

The Ministry of Health has been carrying out a campaign to raise awareness about glaucoma, an eye condition that leads to blindness. The condition causes damage to the eyes as it progresses and if early intervention is not made, one ends up blind. That is why we have dedicated our lead story today to enlighten you about the condition. Find out the early warning signs for which you must seek immediate medical attention.

I would like to remind you that we still publish our interactive columns where you get to ask doctors for guidance on any issues that challenges you. Continue writing to us as you seek guidance to achieving wellness.

Eyes: Guard against glaucoma

From page 25

Who is at risk?

According to experts, people at risk of suffering from glaucoma include;

- Those with a family history of the condition people who have a family history of glaucoma;
- Those over 40 years
- People with diseases such as diabetes and hypertension
- people on steroid treatment and those with short sightedness.
- Experts also state that people of African and Asian descent are at a higher risk of getting the condition than other races.

Treatment and management

Mahender says most of the changes caused by glaucoma are irreversible and so if anyone is suspected to have the condition, then they have to check their eye pressure once a year and if it is not normal then experts will balance it by prescribing medication in form of eye drops or pills and even glasses. The drugs help reduce the eye pressure by slowing the fluid into the eye while others improve on the drainage of the fluids.

"For people with diabetes, there are high chances that their prescriptions are unstable because you might make glasses when their sugar levels are stable and then in a short time they will be unstable and so you need to change them. Therefore, they should have regular checkups," Mahender states.

GLAUCOMA IN CHILDREN



Although old age is one of the risk factors of glaucoma, even children can suffer from the condition. Children suffer congenital glaucoma due to a congenital malformation.

In this case, the eye fluid will be produced but not drained because of a membrane covering the drainage system. Congenital glaucoma affects about 10,000 infants worldwide and untreated cases are the major cause of childhood blindness.

Otiti states that just like in adults, the early stages of glaucoma in children is asymptomatic.

The parent or guardian may never know unless in the later stages in the disease where

they might notice that the baby's eye gets red, tear for no reason and the child is sensitive to light. She adds that children with congenital glaucoma will also have big eyes.

"Since their bodies are still versatile, the eye will just grow bigger in order to accommodate the pressure until it reaches a point when it cannot grow anymore then the child will have symptoms," Otiti says.

Based on this, Mahender adds that children need to go for checkup every six months because as they grow taller, the eyeball lengthens.

It is also important for children to get checked because of the current lifestyle of using phones, playing video games and watching movies.

Otiti adds that the condition can also be treated using laser surgery and surgery to drain the fluid from the eye and reduce pressure.

Expert advice

Otiti advises that at 40 years, one should start regularly eye checkups because as people grow older, their lenses become thicker and full with fluid which pushes the iris forward and blocks the drainage which leads to an angle closure.

Mahender states that ideally one should go for an eye checkup once a year because of the current lifestyle that stresses people's eyes while those diagnosed with glaucoma should go for eye checkup it every six months.

"We spend a lot of time on phones, computers, reading and driving. Sometimes we should keep them calm and relaxed by limiting the time we spend on these electronics," he adds.

If one has diabetes and high blood pressure ensure that one goes for checkups regularly.

According to the glaucoma Research Foundation, foods such as spinach and carrots are good for the eyes because they are rich in anti-oxidants. Other nutrients good for the eyes include vitamins C, E, A and zinc, which can be derived from fruits, green leafy vegetables, papaya, liver, nuts and many more. Stay away from caffeine because it is one of the risk factors of hypertension. Patients should adhere to glaucoma medication