Challenges of agriculture-related eye injuries in Nigeria

Fatima Kyari
Ophthalmologist/Senior Lecturer:
College of Health Sciences,
University of Abuja, Nigeria.

Agriculture, which includes crop farming, livestock rearing and fishing, provides work for up to 70% of the labour force in Nigeria. The agricultural sector contributes up to 20% of the gross domestic product (GDP) of Nigeria, with an average real growth rate of 3.5% from 2014 to 2015.

People involved in agriculture and farm-related activities are at greater risk of eye injuries. Unpublished data from the Nigeria National Blindness and Visual Impairment Survey showed that, of the participants who had a history of eye injury, over half (53%) were farmers. Of those without a history of eye injury, only 39% were farmers. A 5-year hospital review of people with eye injuries showed that more than two-thirds of all eye injuries were sustained on a farm. Although non-penetrating eye injuries were more common, 15% of people were already blind in the injured eye at presentation. In a multi-centre retrospective review of ocular trauma among older people, eye injury most commonly occurred on the farm (37.2%).

Some of the main causes of agriculture-related eye injuries include:

1. Accidental direct trauma with farm implements (e.g. cutlass, hoe, fishing hook, etc.)
2. Vegetable/plant/organic material hitting the eye, or spillage into the eye (cocoa pod, cornstalks, sticks/twigs, palm tree stalks, thorn, leaf, kernel, etc.)
3. Sand spillage into eye
4. Other foreign body (FB) in the eye
5. Animal attack injury (e.g. cow horn injury, spitting cobra, insect sting)
6. Assault injuries during communal conflicts involving crop farmers and cattle herdsman.

A hospital series reported vegetative/plant material as a cause of 42% of eye injuries. Cow horn injury is an important cause of monocular blindness as it often results in severe open globe injuries with corneal repair within 24 hours and sympathetic ophthalmitis – often requiring enucleation/evisceration.

Prevention and management

A large sector of the population is at risk of monocular blindness from agriculture-related eye injuries, so there is a need for prevention. However, there is very little evidence (from research in this area) to guide and develop appropriate messages or policy. Some possible measures include:

1. Raising public awareness and health education through television or radio programmes on eye safety or by giving health education talks in hospital/clinic waiting rooms.
2. Encouraging the use of protective eyewear by those at risk and making such eyewear available and affordable.
3. Establishing a national or state-based ocular injuries register to record incidence by type, cause and pattern of injury. This could be used to inform appropriate public policy and legislation on eye safety.
4. Working with hospitals to develop policies that will allow management of eye injuries on an emergency basis. Departments can collaborate and work out a payment schedule so that treatment/surgery can be initiated without having to wait for payment of fees by patients.
5. Lobbying government, or insurance companies directly, for health insurance to cover the treatment of eye injuries.
6. Demarcating dedicated ranches or areas of free-grazing for livestock/ cattle-rearing which are separate from areas of crop farming. This will help to prevent communal clashes between farmers. This is being implemented in some communities at present.

Preventive measures to include:

- Lobbying government, or insurance companies directly, for health insurance to cover the treatment of eye injuries.
- Encouraging the use of protective eyewear by those at risk and making such eyewear available and affordable.
- Establishing a national or state-based ocular injuries register to record incidence by type, cause and pattern of injury. This could be used to inform appropriate public policy and legislation on eye safety.
- Working with hospitals to develop policies that will allow management of eye injuries on an emergency basis. Departments can collaborate and work out a payment schedule so that treatment/surgery can be initiated without having to wait for payment of fees by patients.
- Lobbying government, or insurance companies directly, for health insurance to cover the treatment of eye injuries.
- Demarcating dedicated ranches or areas of free-grazing for livestock/ cattle-rearing which are separate from areas of crop farming. This will help to prevent communal clashes between farmers. This is being implemented in some communities at present.

References