



# Unilateral blindness in a six-year-old boy following penetrating eye injury from a domestic hen peck

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## DECLARATIONS

### Competing interest

None declared

### Funding

None declared

### Guarantor

AAA

### Contributorship statement

AAA and KFM designed the study; AAA, KFM, PYJ and HAB helped in management; MD performed ocular ultrasound; AAA and KFM were involved in preparation, AAA, KFM, MD, PYJ and HAB reviewed; and AAA, KFM, MD, PYJ and HAB approved the manuscript

### Ethical approval

Approval by Research Ethical Committee of Federal Medical Centre, Birnin Kebbi, Nigeria. Informed

Domestic hen pecking eye trauma causes avoidable blindness and the public should guard against it, especially among children.

## Introduction

Even with a beak and claws as weapons, domestic hens are rarely dangerous. However, they can be defensive and aggressive in territorial protection<sup>1</sup> or breeding.<sup>2</sup> Hen pecking of human eyes is rare but has been reported with varied visual outcomes,<sup>3–6</sup> and may occur with or without provocation.<sup>7</sup> Probably because of its sharp contrast to the face, eyes are an attractive site for pecking. We report a very rare case of unilateral blindness in a six-year-old boy following a hen peck which caused a penetrating eye injury.

## Case report

The boy squatted near a domestic hen and her two-week-old brood of chicks (Figure 1 left) and the 'mother' hen suddenly pecked the boy's left eye. There was associated pain, eye fluid loss and sudden loss of vision. The boy was rushed to the accident and emergency unit of a tertiary hospital nearby, and a casualty officer placed him on ciprofloxacin eye drops (guttae) and syrup amoxicillin. In addition, the patient was instructed to present in the eye clinic of the same hospital two days later. At the eye clinic, both general clinical condition and salient laboratory tests were essentially normal. The visual acuities were 6/9, right eye and light perception, left eye. The right eye was essentially normal. The left eye had mild lid

swelling, conjunctiva hyperaemia and cornea laceration with uveal prolapse about the upper medial quadrant. The anterior chamber appeared formed, but pupillary and posterior segment details could not be ascertained.

The boy eventually had two stage surgeries within a month interval. Examination under general anaesthesia (EUA) revealed further details including healing fibrinous exudates on prolapsed uveal tissue, which had formed a plug along a cornea laceration (Figure 2, top left) (almost letter 'L' or 'V' shaped) extending from 9 o'clock to pupillary margin (about 0.4 cm) then directed upward towards 11 o'clock (about 0.5 cm) (Figure 2, top and lower right). The anterior chamber had iris pigments and hyphaema. There was associated traumatic cataract. After copious irrigation with normal saline the uveal prolapse was excised and wound edges freshened. The obvious lens matter in the anterior chamber was irrigated with minimal disruption. Anterior chamber was formed with viscoelastic and cornea sutured using 9/0 Nylon. Subconjunctival 4 mg dexamethasone and 20 mg gentamycin as well as initial guttae were given. The guttae were recommenced the following day following removal of eye pad and continued till the next surgery. The guttae include Ofloxalab (Ofloxacin 0.3%) 4 hourly, Flucamed<sup>®</sup> (Drugfield Pharmaceutical Limited, Sango-Ota, Nigeria) (Fluconazole 0.3%) 6 hourly, Mydriacyl (tropicamide 1%) 8 hourly and Ivyflur (Flurbiprofen Sodium USP 0.03%) 8 hourly. Furthermore, the patient was placed on syrup Cefunat<sup>®</sup> (Okasa Pharma Pvt Ltd, Satara, India) (Cefuroxime axetil USP) 250 mg 12 hourly for seven days, Brustan-N (Ibuprofen

consent by patient's  
assent and his  
father's written  
consent

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**Reviewer**

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**Figure 1**  
The domestic hen that pecked the boy's left eye: left, the hen and some of its chicks; top right, the hen's beak used to peck the boy's eye; lower right, the hen's shank with claws, a potential weapon.



**Figure 2**  
The boy's pecked left eye: top left, eye at presentation two days after the injury; top right, the eye during the first surgery, after the uveal tissue excision; lower right, the same eye during surgery (forceps exposure for proper visualization); middle left, eye at the end of the first surgery; lower left, eye a month after the surgery, note cornea scar



oral suspension USP 20 mL/kg/day, 10 ml 12 hourly (5 ml contain 100 mg) for five days, intramuscular tetanus toxoid, 0.5 mL and antitetanus serum, 750 IU.

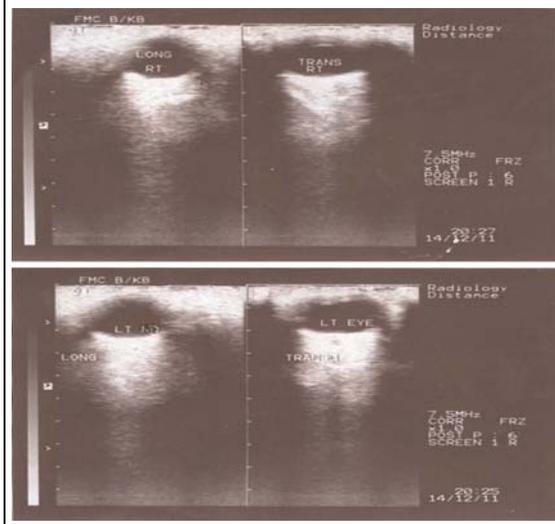
About a month after the first surgery, ocular ultrasound confirmed cataract and revealed intact retina (Figure 3). During the second surgery, EUA revealed cornea scar, 0.4 cm by 0.5 cm (Figure 2, lower left) anterior synechiae, cataract, zonular dehiscence and fibrous capsular bands. Through a superior limbal incision, viscoelastic was introduced to form the anterior chamber/separate the synechiae. Irrigation and aspiration of lens matter was carried out and fibrous bands excised. The available 23.5 Dioptre posterior chamber intraocular lens was implanted. The incision was closed using 9/0 Nylon and the routine drugs were administered as in the first surgery. Postoperatively, guttae were continued as in the first surgery. Also given were oral prednisolone 5 mg daily for 10 days, syrup brustan-N and ascorbic acid 5 mL eight hourly for seven days. Nine months after the surgery, the visual acuity was 2/60.

**Discussion**

An unusual case of penetrating eye injury from hen peck. The action of the hen could have been a defensive/protective act toward the two-week old chicks, as the boy allegedly squatted close to the hen and the brood of chicks. The boy's motive notwithstanding, this could have been interpreted as 'danger' by the hen and caused the resultant defensive/protective eye peck. Probably the boy provoked the hen by reaching out to pick or play with the chicks. Hens are known to be aggressive/defensive during breeding.<sup>2,6</sup> The peck impact was quite high as it damaged the cornea, lens, zonules and anterior vitreous face. The peck impact appeared optimal, possibly due to closeness of the boy's eye to the hen, having squatted; the attack was sudden and unexpected, especially from a familiar hen (and probably a pet), and lack of experience, due to the victim being a child, meant that no attempt was made to frighten the hen in order to abort the attack. Also, it was possible the hen might have associated a child with 'weakness' over the years. Bird pecking of children's eyes have been reported.<sup>5-7</sup>

The initial medical attention appeared inadequate, especially in a tertiary hospital. Eye drops are not advisable in open eye injury as it can facilitate entry of pathogenic organisms into the eye aside their potential toxic effect (higher

**Figure 3**  
Ocular ultrasound of the boy a month after left eye peck, right eye (above), left eye (below)



concentration) on delicate ocular tissues. The delay in ophthalmologist review, occasioned by the medical officer's instruction that the patient should present in the eye clinic 48 hours later, was unexpected for a case of penetrating eye injury, especially in a facility with a resident ophthalmologist.

The initial attention should have been systemic analgesics, antibiotics, antitetanus, padding of the injured eye and immediate consult to ophthalmologist. The initial oral amoxicillin was a welcome prophylaxis against septicaemia. The antitetanus prophylaxis, though delayed, also covered potential tetanus infection.<sup>8</sup> We did not include eye swab microscopy, culture and sensitivity in view of initial broad spectrum ciprofloxacin for more than 48 h before our review. Furthermore, there was no compelling evidence of eye infection during our review. Yet the patient was placed on

both systemic and topical antibiotics including antifungal. Eye drops including analgesics, antibiotics and cycloplegic were commenced after the wound repair.

The patient had two stage surgeries including initial minimal irrigation of the anterior chamber and corneal repair. This was followed after a month interval with cataract extraction and intra-ocular lens implant. The time interval between the two surgeries ensured adequate ocular and systemic drugs coverage and reduction in eye inflammation. Also it was convenient for ocular ultrasound without fear of ocular tissue disruption/provoking hyphaema.

## Conclusion

Ocular trauma from domestic hen peck is a cause of blindness in humans. The public should guard against domestic hen peck ocular trauma especially among children. There is a need to bridge the gaps in emergency eye care among casualty officers through continuing medical education.

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