“You’ll shoot your eye out!” the classic warning to Ralphie Parker in the 1983 movie A Christmas Story elucidates the danger of BB guns, but somehow that caution has not transferred to Airsoft guns. Although Airsoft pellets are not as damaging as BBs, physicians should be aware of the significant ocular trauma these pellets can inflict on their patients.1-5 Airsoft guns are gas- or spring-powered replicas of real firearms capable of reaching velocities of 74.9 m/s.5 Case reports and laboratory studies have found injuries from Airsoft pellets to include hyphema, corneal abrasion, epithelial edema, traumatic mydriasis, iridodialysis, damage to the trabecular meshwork, cataracts, commotio retinæ, retinal hemorrhage, and globe rupture.1-5

CASE REPORT

A 29-year-old man presented to the emergency department with acute onset of left eye pain and degraded visual acuity after being shot in the eye with an Airsoft pellet while having a “toy gun fight.” On gross inspection, there was a “D”-shaped pupil with iridodialysis from the seven o’clock to nine o’clock positions of his left eye. Slit lamp examination and fluorescein staining revealed a large corneal abrasion, corneal edema, and acute iritis (Figure 1). His visual acuity was degraded from his baseline 20/20-0 to 20/50.

Initially, he was treated with oral pain medication for his discomfort, and a combination corticosteroid/antibiotic eye ointment to treat the iritis, edema and to reduce the likelihood of infection. On post-trauma day 1, a mydriatic/cycloplegic agent and an additional corticosteroid eye drop were added to hasten the resolution of the corneal edema and iritis. Over the next two weeks, the patient’s medications were tapered off,
and he had complete resolution of the iritis, the corneal edema, and the corneal abrasion (Figure 2). The patient denied monocular diplopia, but did note some ghosting of images and some extraneous light through the gapping of the iris periphery, particularly at night (Figure 3). These sequelae left him “Not Physically Qualified” to perform his job as a professional aviator. After reviewing the options that would allow him to return to the cockpit, the patient opted for an opaque prosthetic contact lens rather than surgical correction (Figure 4).

DISCUSSION

This case highlights not only the physical damage Airsoft guns can cause, but also the significant secondary effects that this damage can have on our patients’ lives. The patient in this case would have lost his career if a viable solution had not been found to compensate for the permanent effects from his “toy gun fight.” After stabilization of his vision was achieved through medication, the remaining sequelae and his desire to return to the cockpit as soon as possible drove his decision to use a prosthetic contact lens.6-8

In his case, cosmesis was not the primary outcome desired and thus the black-ringed lens was selected to obscure any aberrant light entry (see Figure 4). In addition to office-based ocular examinations, the patient was required to perform flight simulator testing to ensure there was no impact on his ability to safely fly his aircraft. He has since returned to flying without incident.

So in this holiday season when there may be more than Red Ryder Air Rifles floating around, prepare your patients and staff for the possible consequences these toys may bring.

REFERENCES: