

## **Graphite pencils cause ocular injury in pediatric patients: a case series**

### **ABSTRACT**

**Purpose:** Graphite pencils rarely cause ocular injury. However, the available data are limited. We aimed to identify the demographic data, clinical manifestations, presenting visual acuities, and final visual outcomes in children with ocular injuries caused by graphite pencils. **Methods:** A retrospective case series was conducted of children who had ocular trauma due to graphite pencils and was treated at Sabah Women and Children Hospital, Malaysia, from May 2015 to April 2018. The information about age, gender, presenting visual acuity, site and severity of injury, and treatment received were documented for each case. The final visual acuity at 6-month post-trauma was recorded. **Results:** Eight boys were recruited. The mean age was 8.4 years, and ranged from 5 to 10 years old. All had unilateral ocular involvement. The left eye was affected in 62.5% of the patients. The injuries occurred both at home and in schools, with equal distribution of closed and open globe injuries. About 75.0% had injuries that involved the conjunctival, corneal, and scleral tissues and the remaining 25.0% had injuries to the deeper structures including the iris, lens and vitreous. A presenting visual acuity worse than 6/12 (20/40) was documented in 62.5% of the patients and 37.5% had a final visual acuity 6/12 (20/40) or worse, mainly due to corneal scars. **Conclusions:** Injuries caused by graphite pencils mainly affected boys aged from 5 to 10 years. The majority of the boys had injuries to the anterior segment structures, and 62.5% had final visual acuities of 6/9 (20/30) and better. These injuries are essentially preventable.