

Dear Readers

Why is the current issue of *Okulistyka/Ophthalmology* devoted to ocular injuries?

Eye injuries are a significant cause of visual impairment, accounting for **approximately 3% of all emergency department visits**. [1] Globally, they rank fourth among the most common causes of blindness, affecting an estimated 1.5–2 million individuals each year.

In a study by Lu S., a retrospective analysis was conducted on risk factors and characteristics associated with eye injuries in central and northern China. The results reveal a pattern of increasing incidence, followed by stabilization of the number of patients with eye injuries between 2012 and 2020, and a subsequent decline. This trend may be linked to workplace shutdowns and home isolation measures during the COVID-19 pandemic, which resulted in fewer accidental injuries. The male-to-female ratio for eye injuries was approximately 4:1, which is consistent with earlier studies highlighting the predominance of open-globe injuries among children and young adults, particularly males. [1] Increased participation of boys in high-risk activities contributes to the highest incidence of injuries observed in boys aged 1–10 years.

Road traffic accidents are considered the main etiological factor in most reported injuries. A substantial number of ophthalmic complications arise from zygomaticomaxillary complex (ZMC) fractures, although fractures involving the orbital rims and walls typically lead to more severe consequences. The etiology of maxillofacial trauma includes road traffic accidents, assaults, falls, sports injuries, and others.

Work-related eye injuries occur more frequently in developing countries than in developed ones and are common in construction, industry, and agriculture, often caused by metal plates and iron nails. Up to 90% of workplace injuries could be prevented through educational initiatives and mandatory eye protection. [1]

The **Russian invasion of Ukraine**, which began in February 2022, has resulted in disability and death among many people, including soldiers, military personnel, and civilians. Among the injuries, often multi-organ in nature, numerous craniofacial traumas have been observed, including eye injuries.

Maxillofacial injuries, particularly those involving the midface (such as ZMC fractures, Le Fort II and III fractures, and naso-orbito-ethmoidal (NOE) fractures) frequently lead to ocular complications, including complete loss of function. Consequently, every patient with maxillofacial trauma should undergo an ophthalmic examination and be closely monitored for potential treatment needs.

Among craniofacial injuries, mandibular fractures are the most common, while ZMC fractures are the second most frequent type of facial fracture in maxillofacial trauma, followed by orbital, NOE, and Le Fort fractures. Midface injuries such as ZMC, orbital, Le Fort II, and Le Fort III fractures carry an increased risk of visual impairment. These injuries pose a considerable risk of vision loss and may lead to ocular complications associated with significant morbidity.

Management of eye injuries resulting from midface trauma requires a **multidisciplinary approach** to determine the optimal treatment. Depending on the type of injury, patients with ocular trauma may receive various therapies, including conservative, pharmacological, surgical, or combined treatment.

Management of severe ocular injuries must not be delayed, as this may result in loss of the eye or severe damage leading to vision loss. Both diagnosis and treatment should take place **in specialized centers**.

Patients with facial trauma may be in shock, frightened, and in pain. Pain is recognized as a factor that can contribute to the development of post-traumatic stress disorder. Children should remain with a caregiver/parent, and discussions of a potentially poor prognosis should be avoided in their presence. Oral analgesics should be administered when needed. Tetanus prophylaxis and infection prevention measures (aseptic technique and antibiotics) are recommended. Assessment should include evaluation of the eye's protective structures, eyelid closure, passive motility (traction test), ocular movements in all nine gaze directions, Hess screen testing (the so-called orbital chart), and evaluation for diplopia caused by restricted ocular motility, infraorbital nerve hypoesthesia, proptosis or enophthalmos. Imaging of the orbits (computed tomography (CT) and/or magnetic resonance imaging (MRI)) is essential. MRI is contraindicated when a magnetic foreign body is suspected. **Both eyes must be assessed, even if the injury appears unilateral. Good visual function does not exclude ocular complications.**

In cases of chemical injury, immediate intervention is required: irrigation and removal of foreign bodies. **The burned eye should not be patched.**

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1. Shuwen Lu, Haoyu Li, Xirui Yang, Chao Ma, Xian Li: *Epidemiology of Ocular Trauma and Predictive Modeling of Visual Outcomes: A 12-Year Retrospective Study at a Tertiary Hospital in China Risk Manag Healthc Policy*. 2025 Feb 28; 18: 691–702. doi: 10.2147/RMHP.S50567