**AIM:** To evaluate the clinical findings of toxic keratopathy associated with abuse of topical anesthetics and the treatment efficacy of amniotic membrane transplantation (AMT).

**METHODS:** Fifteen eyes of 10 patients with abuse of topical anesthetics were included in this study. The data collected included patients’ demographic information, initial best corrected visual acuity (BCVA), clinical findings, time to AMT, duration of epithelization, additional treatments, posttreatment BCVA, and the results of psychiatric examination.

**RESULTS:** All patients were male, with the mean age of 37.9±5.4y. The patients had received 0.5% proparacaine hydrochloride due to pain resulting from foreign bodies, such as welding flash burns and car battery explosions, for a mean of 18.2±12.4d. The mean initial BCVA of the patients was 0.069±0.100. All patients had persistent epithelial defects, stromal infiltration, ring ulcer, and corneal edema. Initially, medical treatment was attempted in all cases. Because of severe pain, persistent epithelial defects and progressing stromal thinning did not improve with medical treatment, thus, the patients underwent AMT. The mean posttreatment BCVA of the patients was 0.33±0.27. All of them, except for two patients, showed improved visual acuity. One patient underwent evisceration for corneal melting and endophthalmitis in another center, and one patient underwent evisceration for severe pain of unknown origin. All 5 patients who consented to a psychiatric examination had depression, had personality disorder, and used tobacco.

**CONCLUSION:** AMT appears to be an effective method for pain relief, rapid epithelial and stromal healing; however, visual prognosis is still poor despite medical and surgical interventions.