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Therapeutic penetrating keratoplasty in a patient with acute perforated corneal ulcer caused by *Pseudomonas aeruginosa* keratitisBožana Mrvelj^a, Tomislav Kuzman^{a,b}^a University of Zagreb, School of Medicine, Zagreb, Croatia^b Department of Ophthalmology, Zagreb University Hospital CentreDOI: <https://doi.org/10.26800/LV-144-supl2-CR71> Božana Mrvelj 0000-0001-9586-6090, Tomislav KuzmanKeywords: corneal ulcer, keratitis, keratoplasty, *Pseudomonas aeruginosa*

INTRODUCTION/OBJECTIVES: Penetrating keratoplasty is a surgical procedure where a damaged section of the cornea is surgically removed and replaced with a healthy donor tissue. Therapeutic keratoplasty performed in case of active inflammation is called 'à chaud' (french – hot). Here we present a case of keratoplasty à chaud in a patient with a perforated corneal ulcer caused by *Pseudomonas aeruginosa* infection.

CASE PRESENTATION: A 25-year-old male presented to an emergency ophthalmological department with redness, pain, and vision loss in his left eye. The patient reported wearing soft contact lenses prior to this incident. The ophthalmic examination revealed corneal edema, central corneal ulcer with descemetocoele, corneal melting and a threat of total perforation. From the appearance of first symptoms to potential blindness, passed hardly 24 hours. A conjunctival swab was obtained and, subsequently, the patient was hospitalized and treated with empirical antibiotic and antimycotic therapy for keratitis. Meanwhile, *Pseudomonas aeruginosa* was isolated from the culture. Corneal infection caused by *P. aeruginosa* has significantly worse outcome than infection with other bacterial pathogens, causing rapid corneal melting, as it is extremely aggressive. Therapeutic penetrating keratoplasty à chaud was urgently performed. In this case, keratoplasty along with elimination of the affected tissue, restores the integrity of the cornea and saves visual function. During the following days, clinical features improved, and the patient recovered with great anatomic and functional outcome.

CONCLUSION: Therapeutic penetrating keratoplasty à chaud is a crucial procedure for restoring the patient's vision and preventing corneal blindness that developed in a case of perforated corneal ulceration.

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Case report: Transcervical approach for removal of the tumor of the primary parapharyngeal space (PPS)Dora Rebek Divković^a, Ana Kvolik^b^a School of Dental medicine University of Zagreb^b Department of maxillofacial surgery, University Hospital Center OsijekDOI: <https://doi.org/10.26800/LV-144-supl2-CR72> Dora Rebeka Divković 0000-0001-7587-7286, Ana Kvolik 0000-0002-3991-6433

Keywords: branchial cyst, PPS tumor, surgery, transcervical approach

INTRODUCTION/OBJECTIVES: Tumors of the primary parapharyngeal space (PPS) account for less than 1% of all head and neck tumors. Because of the asymptomatic aspect of the disease, PPS tumors are usually detected in the advanced stage. In this case report, we present rare a PPS tumor and its treatment.

CASE PRESENTATION: A 41-year-old male patient was admitted to the Osijek University Hospital in November 2021. The patient complained of pain in the neck, ear and, odynophagia. CT showed a well-demarcated cystic mass on the right side of the parapharynx. Due to suspicion of the tumor of the primary parapharyngeal space, an MRI was performed. Pre-operative MRI in the axial section showed a 45x31x52 mm (APxLLxCC) mass extending from the base of the skull to the submandibular region, leaning against the medial pterygoid muscle and the paravertebral muscle. The patient was treated with surgical resection via a transcervical approach. Pathohistological findings show cyst walls built of collagenous connective tissue with moderate inflammatory infiltrates of lymphocytes and plasma cells, lined with multicellular squamous epithelium. The described histological picture corresponds to a branchial cyst. The patient's recovery was uneventful and he had no complaints on 2 months follow-up.

CONCLUSION: In summary, the efficiency of PPS surgery is contingent on two factors: the accurate identification of the lesion, and the appropriate surgical approach.