The aim of the study was to give a short review of systematic side-effects, their pathophysiology, clinical appearance and therapy, which the dentist should apply in the dental surgery until the arrival of urgent medical help.

We classified systematic side-effects into: psychogenic reactions, toxic reactions, reactions to vasoconstrictors and reactions of hypersensitivity.

The most frequent clinical presentation of psychogenic reaction is syncope, a consequence of vasovagal reactions or hyperventilation. The condition requires the cessation of the dental operation and placing the patient in Trendelenburg's position.

Toxic reactions occur when the concentration of anaesthetic in the blood exceeds the minimal toxic concentration. They can occur in the case of overdosing and intravascular application of the anaesthetic. Toxicity can be interpreted in the central nervous and cardiovascular system. Involvement of the cardiovascular system can be seen in AV block of different degrees or asystolia, which requires resuscitation. Toxic reactions in CNS are interpreted as excitation or depression. The most serious presentations of excitation are clonic-tonic cramps, which are halted by intravenous application of diazepam. Respiratory depression requires mechanical ventilation of the patient.

Reaction to vasoconstrictors is the result of the stimulation of adrenergic receptors in the cardiovascular system, and symptoms are transient raised frequency of cardiac and blood pressure, and also arrhythmia. In the case of mild symptoms the patient should be sedated and kept under observation, and in the case of significantly raised blood pressure medication therapy applied.

Reactions of hypersensitivity may be local or systematic. Local reactions involve changes on the skin and mucous membrane such as erythema and urticaria, and they require intramuscular application of an antihistaminic. Systematic hypersensitivity includes laryngo-broncho spasm with a fall in blood pressure. The therapy choice is intravenous application of adrenaline, antihistaminic and corticosteroids and ventilation of the patient with 100% oxygen.

Algorithm of clinical procedure is proposed for easier differential diagnosis and therapy.

Primjena hiperbarične oksigenacije u oralnoj kirurgiji

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Sažetak

Hiperbarična oksigenacija (HBO) kao metoda liječenja ima svoju primjenu i u oralnoj kirurgiji. Udisanjem čistoga kisika pod povećanim tlakom u tkivima nastaje višestruko povećana količina kisika. Na taj se način uklanja hipoksija koja se u mnogim patološkim stanjima redovito javlja kao uzrok ili posljedica. Čitav niz fizioloških mehanizama se normalizira i poboljšava. Poboljšava se perfuzija tkiva i mikrocirkulacija zbog reodinamskoga djelovanja i neoangiogeneze. Poboljšava se metabolička aktivnost na subcelularnoj razini. HBO regulira lokalni i opći imunitet. Djeluje antibakterijski, pogotovo na anaerobe, što je jako važno u oralnoj infekciji. Osim toga djeluje sinergistički s antibioticima i u slučajevima infekcija s rezistentnim mikroorganizmima.

U oralnoj kirurgiji HBO se može primijeniti u liječenju akutnih i kroničnih upala mekih tkiva i čeljusti te kod tumorskih pacijenata koji su zračeni. Važna je u preventivi prije različitih zahvata i kod imunokompromitiranih kroničnih pacijenta (dijabetes, jetra, bubrezi i dr.). Osobito je to važno prije zahvata na kostima (ekstrakcija, rekonstrukcija defekta, implantati i sl.).

Kako su kontraindikacije malobrojne, nuspojave praktično zanemarive, a korist u zdravstvenom i financijskom pogledu (cost benefit) neusporedivo veća, to se može reći da je HBO terapija vrlo važno, moćno i suvremeno sredstvo liječenja, koje od nedavno imamo u Zagrebu u KB “Dubrava”.

Application of Hyperbaric Oxygenation in Oral Surgery

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Summary

As a method of treatment hyperbaric oxygenation also has its application in oral surgery. Inhalation of pure oxygen under increased pressure leads

to multiply increased amount of oxygen in the tissues. In this way hypoxy is removed which regularly occurs in numerous pathological conditions as the cause or consequence. A whole series of physiological mechanisms are normalised and improved. Perfusion of tissue and microcirculation are improved because of the reodynamic effect and neoangiogenesis. Metabolic activity is improved to subcelular level. HBO regulates local and general immunity. It acts antibacterially, particularly to anaerobes, which is of great importance in the case of oral infection. Furthermore, it also acts synergistically with antibiotics in cases of infection with resistant micro-organisms.

HBO can be applied in oral surgery in the treatment of acute and chronic inflammations of soft tissues and jaws, and also in the case of irradiated patients with tumours. It is important as a preventive prior to various operations and in the case of immunocompromised, chronic patients (diabetes, liver, kidneys etc.). It is particularly important prior to operations on bones (extraction, reconstruction of defects, implants etc.).

As contraindications are few, side-effects practically negligible, and usefulness with regard to health and cost benefit incomparably greater, it can be concluded that HBO therapy is a very important, powerful and modern means of treatment, which has recently become available in the University Hospital "Dubrava".

Oralna rehabilitacija pacijenta s ograničenim otvaranjem usta uzrokovanim ratnom ozljedom mekih i tvrdih tkiva gornje čeljusti

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Sažetak

U radu je prikazana oralna rehabilitacija pacijenta s ograničenim otvaranjem usta uzrokovanim ratnom ozljedom mekih i tvrdih tkiva gornje čeljusti sa svrhom da se postigne zadovoljavajuća estetika, povoljno opterećenje zuba nosača te, u konačnici, da se pronađe najpovoljniji smjer uvođenja mobilno-protetskih nadomjestaka izbjegavajući pritom ozljede mekih struktura lica.

Pacijent je opskrbljen gornjom djelomičnom protezom s reduciranom metalnom bazom, retiniranom konus krunicama te donjom potpunom protezom s mogučnošću da se ona poslije prilagodi u mandibularnu pokrovnu protezu retiniranu usadcima.

Oral Rehabilitation of a Patient with Restricted Opening of the Mouth Caused by a Combat Injury of the Soft and Hard Tissues of the Maxilla

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Summary

The paper presents the oral rehabilitation of a patient with restricted opening of the mouth, caused by a combat injury of the soft and hard tissues of the maxilla, with the object of achieving satisfactory aesthetics, sufficient loading of the abutment teeth and, finally, finding the most suitable course for introducing a mobile-prosthetic restoration, and at the same time avoiding damage to soft facial structures.

The patient was supplied with upper partial dentures with a reduced metal base, retained with conus crowns and a lower full denture with the possibility of its later adaptation into a mandibular overdenture retained by implants.

Procjena gustoće mandibularne kosti u veslača ovisno o indeksu mase tijela

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Sažetak

Sile naprezanja mišića koje se razvijaju u svakodnevnoj tjelesnoj aktivnosti potiču proces koštane formacije u područjima hvatišta napregnutih mišića, a to pojačava mineralni sastav kosti i povećava njezinu gustoću.