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Free Radicals, Antioxidants and Redox Potential

The role of free radicals and antioxidants is often underestimated despite their involvement in key metabolic processes, although they participate in many important metabolic processes in the life of humans, animals and plants. Their quantity and quality differ from each other, which is not respected. Each cell is attacked approximately 10,000 times by free radicals. Oxidative stress is the cause of many problems, especially in viral diseases. Monitoring of redox potentials in body fluids is usually not carried out. Viral replication is influenced by oxidative energy, derived from either host metabolism or free radical activity, which is supplied by oxidation by free radicals or the host. Nucleic acid mutations due to the effect of free radicals can be the cause of carcinomas, and possible defense against mutations could help eradicate dangerous viruses. The importance of malondialdehyde and antibodies against it is discussed. Eliminating free radicals, reducing lipoperoxidation, and protecting against environmental oxidative stress are important factors for human health.
Study objective: To highlight the importance of free radicals, antioxidants and redox potentials for patient diagnosis and therapy.
Methods: This study synthesizes findings from multiple published sources, including our own research.
Results: Findings highlight the role of free radicals in oxidative stress, DNA damage, and viral replication, with redox potential (ORP) and Malondialdehyde (MDA) identified as key diagnostic markers.
Conclusion: Monitoring oxidative balance and targeting free radical activity are essential for preventing cellular damage and improving clinical outcomes in oxidative stress-related diseases.

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Success Rate and Complications of Endoscopic Deacryocystorhinostomy without Stenting: A Retrospective Study

Endoscopic dacryocystorhinostomy (EDCR) is a well accepted surgical treatment for patients with nasolacrimal duct obstruction (NLDO). Previously, external dacryocystorhino-stomy was considered as the gold standard treatment for NLDO, however, EDCR has gained momentum due to its several advantages. The EDCR has been sounding more aesthetic and as functional compared to the traditional external dacryocystorhinostomy in the surgical treatment of nasolacrimal duct obstruction with comparable outcomes.
Purpose: to determine the success rate and complications of endoscopic dacryocystorhinostomy without stenting.
Materials and methods: it was a retrospective study performed in the department of Otorhinolaryngology and Head and Neck Surgery (ORL-HNS), Universal College of Medical Sciences-Teaching Hospital (UCMS-TH) from June 2019 to September 2024. A total of 19 patients charts were reviewed. All the cases were performed under general anesthesia. All the cases had undergone without silicon stenting and were regularly followed up for a period of 3 months. Post operative stomal patency and complications were noted based on subjective and endoscopic evaluation.
Results: Out of 19 patients, 12 were female and 7 were male with the age range of 12 to 70 years. Transnasal synechiae was seen in 2 female and 1 male patients. Stomal patency was 100% with no recurrence of epiphora in 17 patients (89.4%) during 3 months of follow up. 2 female patients with released synechiae didn’t come for 3 months follow up.
Conclusion: It is a safe and minimally invasive procedure and has a comparable success rate to external DCR with an additional advantage of more aesthetic value.
