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Orbital Complications of Dental Implants

Dental implants are a common procedure to create support for prosthetic teeth. Implants are typically placed in the maxilla; however, anchors in the zygomatic bone can be used for cases of maxillary atrophy. Due to their location, these zygomatic dental implants have increased risk for complications to the eye and orbit. Current research of the topic is limited to case reports and incidental discussion, with no known review article dedicated to the topic. This systematic review looked at ophthalmological complications of dental implants to familiarize ophthalmologists with the potential complications and their treatment options. The review was conducted using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Various searches using PubMed, Elsevier, and Google Scholar were used to search for articles using search terms including 'dental,' 'implant,' 'complication,' 'eye,' and 'orbit.' Exclusion criteria included articles that were unavailable in English or written before 1980. 26 articles were included in this review: eleven case reports, one case series, nine cohort studies, one randomized controlled trial, and four review articles. Most orbital complications resulted from zygomatic implants. The most common of which was infraorbital paresthesia, followed by intraoperative orbital penetration. Other complications of zygomatic implants included implants placed into the orbit, orbital hematomas, extraocular muscle damage, diplopia, subconjunctival hemorrhage, periorbital fistulae, infraorbital rim infections, and orbital emphysema. Direct orbital complications of maxillary implants included paresthesia, and implant migration into the orbit. Of 43 cases, which included outcomes, 11 patients required further procedures, and five patients had irreversible damage. It is important for both oral and maxillofacial surgeons and ophthalmologists to recognize these complications for proper coordination of care and treatment.