REPLACEMENT OF TEETH BY IMMEDIATE IMPLANTATION IN INFECTED SITE

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BACKGROUND:

THE LITERATURE REPORTS SUCCESS RATES OF 92%–100% FOR IMMEDIATE IMPLANTATION IN INFECTED SOCKETS, WHICH IS COMPARABLE TO THE 98.4% SURVIVAL RATE FOUND FOR IMMEDIATE IMPLANTS IN NON-INFECTED SOCKETS. THERE IS NO EVIDENCE THAT POINTS TOWARDS DECREASED SURVIVAL RATES OF IMPLANTS PLACED IN INFECTED SOCKETS COMPARED TO PLACEMENT IN NON-INFECTED SITES.

Fig.1 Preoperative intraoral view

AIM:

TO EVALUATE THE SUCCESSES OF THE IMMEDIATE IMPLANT PLACEMENT IN AREAS EXHIBITING PERIAPICAL LESIONS, GAINING AESTHETICS AND FUNCTION BY ESTABLISHING A SUCCESSFUL PROTOCOL FOR SAFE IMPLANT INSTALLATION.

Class X	A tooth in this category is **nonsalvageable** and is indicated for extraction. Such teeth cannot be restored or present pathologies that currently dentistry does not have a solution for. These include teeth that may pose risk to the patient's health.
Periodontal health and alveolar support	A tooth with < 30% bone support and cannot be cleansed or maintained without acute outbreaks of periodontal infection.
Remaining tooth structure	No remaining supragingival sound coronal tooth structure.[65,66] Loss of tooth structure deep into the root dentin/canals.[30,67]
Endodontic condition	A vertical root fracture,[3,68] or a tooth that has been retreated several times endodontically and/or surgically without resolution.
Occlusal plane and tooth position	A tooth so far super-erupted or tilted out of the occlusal plane that it cannot be restored into correct function, or would interfere with the restoration of that arch or the restoration of the opposing arch.

Fig.3 Classification and prognosis evaluation of individual teeth

Fig.2 Extraction, bone grafting and implantation

MATERIAL AND METHODS

SURGICAL INTERVENTION AND BONE GRAFTING WERE PERFORMED IN ADVANCE OF TOOTH EXTRACTION IN ORDER TO RESOLVE THE INFECTION AND DEVELOP THE SITE FOR IMMEDIATE IMPLANTATION, HELPING ENSURE THE BONE VOLUME NEEDED FOR HIGH PRIMARY STABILITY.

CASE PRESENTATION

A MALE PATIENT PRESENTED WITH A VERTICAL FRACTURE OF MAXILLARY RIGHT CANINE (TOOTH #1.3) UNDER A TEMPORARY CROWN. IT HAD BEEN REPEATEDLY DEBONDED FROM THE ENDODONTICALLY TREATED CANINE WITH A PRESENCE OF A PERIAPICAL INFECTION, ALONG WITH A PREVIOUS APICOECTOMY PROCEDURE. THE FILLING OF THE ROOT-END CAVITY WAS REMOVED, THE PERIAPICAL DEFECT WAS GRAFTED WITH CORTICO/CANCELLOUS ALLOGRAFT MATERIAL, AND THE SITE WAS ALLOWED TO HEAL BEFORE EXTRACTION AND IMMEDIATE IMPLANT PLACEMENT IN 4 MONTHS.

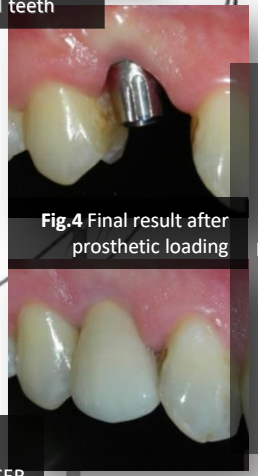

Fig.4 Final result after prosthetic loading

CONCLUSION

THIS STUDY IS A PROOF OF PRINCIPLE THAT SOCKETS CAN HEAL NATURALLY WITH IMMEDIATELY PLACED IMPLANTS IN INFECTED SITES AND TISSUE SHRINKAGE CAN BE REDUCED BY UTILIZING LEAST INVASIVE SURGICAL AND PROSTHETIC PROTOCOL.

RESULTS

THE REPORTED CASE HAS CLINICALLY DEMONSTRATED THAT THE PRESENTED PROTOCOL WITH THE LASER DECONTAMINATION OF THE SOCKET, GRAFTING WITH AN IN SITU HARDENING MATERIAL AND NON-SUBMERGED HEALING IS AN ACCEPTABLE PROTOCOL FOR THE MANAGEMENT OF THE IMPLANT REHABILITATION OF PATIENTS WITH INFECTED TEETH REQUIRING EXTRACTION.

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