The clinical application study of dental implant fixed prosthesis was obtained with minimally invasive surgery in edentulous jaw patients

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Background: There were many old patients with edentulous jaw in China. More and more patients hoped to get fixed prosthesis by dental implant. In a variety of methods for the implants prosthesis of edentulous jaw patients, the implant supported fixed restoration is closer to the natural tooth and is more acceptable to patients. Of course, the physical condition of old edentulous jaw patients should be considered. So minimally invasive surgery is a good method for edentulous jaw patients.

Aim/Hypothesis: The purpose of this clinical study was to discuss edentulous jaw patients, who implanted 6–8 implants by way of minimally invasive surgery. The implant fixed prosthesis was finished.

Material and Methods: The edentulous jaw patients that required dental implant fixed prosthesis were selected. The detailed treatment plans were made. 6–8 implants were implanted by way of flapless surgery method. The surgical method of digital guide or free hand were applied. The old denture was used, after it was modified. About 4–6 months later, the segmental fixed bridges or the whole bridge of implants were made and at least 12 teeth were restored. The postoperative reaction of patients were followed up. The survival rate of implants and the repair complication were counted.

Results: After minimally invasive surgery, patients rarely feel pain and swallow. The subjective feeling of patients was good. 286 implants were implanted and implant fixed prosthesis of 38 edentulous jaws were finished using this method from 2010 to 2018. During the follow-up visit period (0.5–7 years), the survival rate of implants was 99.3% and the tissue around implants was stable. The local porcelain cracking was happened in 12 PFM bridges at the beginning of repairs were finished. Because of occlusal construction, occlusal adjustment should be done repeatedly. After several adjustment, the porcelain cracking was seldom happened.

Conclusions and Clinical Implications: Six to eight implants supported fixed prosthesis could make the edentulous jaw patients of obtained ideal the masticatory function. The prosthesis was comfortable and convenient. The hygiene of prosthesis is easy to maintain. The acceptance and satisfaction of patients were high. The minimally invasive surgery is a good method for old patients of edentulous jaw.