医学三维重建联合3D打印在颌骨缺损修复重建术中的应用

肖晨亮1 ，徐 路1 ，陈颖坤1 ，孙丽君2

（联勤保障部队第920医院 1.耳鼻咽喉头颈外科；2.普通外科 云南 昆明 650032）

[摘要]目的：探讨医学三维重建联合3D打印在颌骨缺损修复重建术中的临床应用效果。方法：选取2018年1月-2021年1月于 笔者医院口腔科就诊的60例颌骨缺损患者为观察对象，按照选择的手术方式不同将患者分为医学三维重建联合3D打印辅助手 术组（观察组）和常规手术组（对照组），每组30例。两组患者术前均进行口腔专科检查并给予口腔卫生维护及指导，在此 基础上观察组行医学三维重建联合3D打印辅助手术，对照组行常规手术，比较两组患者手术相关指标、手术效果、位点移 动距离、术后并发症发生情况及患者满意度。结果：观察组患者手术时间短于对照组，术中出血量少于对照组，两组比较差 异均有统计学意义(P＜0.05)；观察组优良率（96.67%）高于对照组（80.00%），差异比较有统计学意义(P＜0.05)；观察组 手术前后上颌各位点移动距离与对照组相比均显著减小（P＜0.05）；观察组术后并发症总发生率为6.67%，低于对照组的 13.33%，差异无统计学意义(P＞0.05)；观察组术后外貌恢复情况评分高于对照组，差异比较有统计学意义(P＜0.05)，两组 咀嚼功能和发音情况评分差异比较无显著性（P＞0.05）。结论：在颌骨缺损修复重建术中应用医学三维重建联合3D打印可 有效缩短手术时间，减少术中出血，提高手术效果，促进外形恢复，安全性好，值得临床推广应用。

[关键词]医学三维重建；3D打印；颌骨缺损；修复重建；临床效果

[中图分类号]R782 [文献标志码]A [文章编号]1008-6455（2023）01-0085-04

Application of Medical Three-dimensional Reconstruction Combined with 3D Printing in Repair and Reconstruction of Jaw Defects

XIAO Chenliang1 ,XU Lu1 ,CHEN Yingkun1 ,SUN Lijun2

(1.Department of Otolaryngology Head and Neck Surgery; 2.Department of General Surgery,920th Hospital of Joint Logistics Support Force,Kunming 650032,Yunnan,China)

Abstract: Objective To observe and explore the clinical effect of medical three-dimensional reconstruction combined with 3D printing in the repair and reconstruction of jaw defects. Methods 60 patients with jaw defects who were treated in department of stomatology of the hospital between January 2018 and January 2021 were selected as observation subjects, and the patients were divided into medical three-dimensional reconstruction combined with 3D printing assisted surgery group (observation group) and routine surgery group (control group) according to the different selected surgical methods, with 30 cases in each group. Patients in both groups underwent oral specialist examination and were given oral hygiene maintenance and guidance before surgery. On this basis, the observation group underwent medical three-dimensional reconstruction combined with 3D printing assisted surgery, and the control group was given conventional surgery. The related indicators of surgery, surgical effect, site movement distance, occurrence of postoperative complications and patient satisfaction were compared between the two groups. Results The surgical time of observation group was shorter than that of control group, and the intraoperative blood loss was less than that of control group (P＜0.05). The excellent and good rate with 96.67% of observation group was higher than 80.00% of control group (P＜0.05). The each site movement distance of upper jaw before and after surgery in observation group was significantly shortened compared to control group (P＜0.05). The total incidence rate of postoperative complications in observation group was lower than that in control group (6.67% vs 13.33%) (P＞0.05). The postoperative appearance recovery score was higher in observation group than that in control group (P＜0.05). There were no significant differences in the scores of masticatory function and pronunciation between the two groups (P＞0.05). Conclusion The application of medical threedimensional reconstruction combined with 3D printing in the repair and reconstruction of jaw defects can effectively shorten the surgical time, reduce the intraoperative blood loss, improve the surgical effect and promote the recovery of shape, with good safety.

Key words: medical three-dimensional reconstruction; 3D printing; jaw defects; repair and reconstruction; clinical effect