

Role of Meticulous Nursing Care in Complete Denture Prosthesis for Elderly Patients with Flat Alveolar Ridge: Postprint

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Date: 2023-05-12T00:00:00+00:00

Abstract

Objective: To investigate the clinical effectiveness of refined nursing care in complete denture restoration for elderly patients with low alveolar ridges.

Methods: A retrospective analysis was performed on the clinical data of 44 elderly patients with low alveolar ridges undergoing complete denture restoration. All patients received refined nursing intervention after admission, and denture restoration outcomes were observed.

Results: Among the 44 patients, only 17 cases had poor restoration outcomes, all of whom were first-time complete denture wearers. Patient satisfaction at the 1- and 3-month follow-up visits was 95.45% (42/44) and 100.00% (44/44), respectively.

Conclusion: The application of refined nursing care helps improve complete denture restoration outcomes in elderly patients with low alveolar ridges and enhances patient satisfaction with nursing care.

Full Text

Application of Refined Nursing Management in Complete Denture Prosthodontics for Elderly Patients with Low and Flat Alveolar Ridge

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Abstract

Objective: To investigate the effect of refined nursing management in complete denture prosthodontics for elderly patients with low and flat alveolar ridge.

Methods: The clinical data of 44 elderly patients with low and flat alveolar ridge requiring complete denture prosthodontics were retrospectively analyzed. All patients received refined nursing management after admission, and their denture restoration outcomes were observed.

Results: Among the 44 patients, the number with suboptimal restoration outcomes was not specified, all of whom were first-time complete denture wearers. Patient satisfaction at 1 and 3 months follow-up was not reported.

Conclusion: The application of refined nursing management helps improve the outcomes of complete denture prosthodontics and enhances patient satisfaction with nursing care in elderly patients with low and flat alveolar ridge.

Keywords: denture prosthodontics; refined nursing management; alveolar ridge; comfort

Introduction

The fourth national oral health epidemiological survey revealed that [percentage]% of elderly individuals aged 65-74 were completely edentulous, with [percentage]% receiving denture restoration. As domestic aging trends intensify, the population of elderly individuals has exceeded 140 million, accounting for approximately [percentage]% of the total population. The number of elderly patients with missing dentition has gradually increased, with many experiencing severe alveolar ridge resorption that significantly impacts masticatory efficiency, speech, aesthetics, and psychological well-being. The issue of complete denture restoration for elderly patients who cannot afford implant-supported dentures has become a clinical focus.

Complete denture prosthodontics is a traditional oral restoration method. For patients with low and flat alveolar ridges, the thin surface mucosa results in poor denture retention and stability, easily causing pressure pain. Successful complete denture restoration in elderly patients depends not only on the technical skills and coordination of doctors, nurses, and technicians, but also on patient psychological factors, compliance, and family support. As society progresses, elderly patients demand higher quality medical services. Refined nursing management has emerged against this background as a novel concept that follows the bio-psycho-social holistic model, emphasizing detailed nursing operations and focusing on patients' physical and psychological experiences based on comprehensive nursing assessments to maximize patient cooperation and provide superior nursing care.

This study retrospectively analyzed the clinical data of 44 elderly patients with low and flat alveolar ridges who underwent complete denture restoration with

refined nursing management.

1. Materials and Methods

This retrospective study included 44 elderly patients with low and flat alveolar ridges who required complete denture prosthodontics in our department. Patients with abnormal alveolar bone, oral inflammation, bruxism, maxillo-facial diseases, bleeding tendency, immunocompromise, psychiatric disorders, consciousness disturbances, incomplete data, or inability to cooperate were excluded.

A working group comprising experienced prosthodontists, coordinating nurses, and technicians was established to standardize workflows and develop refined nursing care plans. Before treatment, patients and their families received comprehensive health education about oral environment preparation, treatment duration, materials, costs, impression-taking procedures, cooperation methods, and home self-care precautions.

Pre-treatment nursing involved collecting patient information, conducting comprehensive assessments, and establishing detailed records of medical history, examination results, previous dental treatments, oral hygiene habits, psychological status, and family support. Nurses actively communicated with patients to understand their concerns, answer questions, and alleviate anxiety while assisting doctors in developing restoration plans.

Intra-treatment nursing began with environmental preparation, where nurses guided elderly patients to the dental chair, provided cushions for those with cervical or lumbar discomfort, adjusted lighting, and offered stress-relief measures. During impression taking, nurses explained material properties, provided psychological support, instructed nasal breathing techniques, and guided patients to tilt their heads forward with relaxed facial muscles. For mandibular impressions, patients practiced tongue exercises beforehand. Throughout the procedure, nurses offered comfort, promptly cleaned residual materials, and ensured proper tray selection. The temperature of modeling compound was controlled using the forearm to prevent burns, while alginate impression material consistency was adjusted according to the dentist's preference and patient cooperation, ensuring sufficient flow without causing gagging while capturing clear, complete impressions. Completed impressions were immediately sent to the laboratory for casting.

For bite registration, nurses assisted in recording vertical and horizontal jaw relationships, midline, lip fullness, facial proportions, mandibular movements, and temporomandibular joint symptoms. During wax try-in, mirrors were provided for patients to evaluate denture aesthetics, with adjustments made based on individual preferences. At denture delivery, patients practiced chewing with provided foods, and after 30 minutes, dentists examined for pressure points and made further adjustments. Suboptimal restoration was defined as requiring more than three adjustments or inability to adapt after three months.

Post-treatment nursing included restoring the chair position, assisting with rinsing, scheduling follow-up appointments, and providing detailed instructions. Comprehensive health education covered dietary care (starting with small, crisp foods, chewing slowly, using posterior teeth), handling denture discomfort, oral hygiene, denture storage (cleaning with water and soft brush or denture cleaner, avoiding hot water), managing mucosal pressure or displacement (wearing dentures before the follow-up visit to show pressure marks, using denture adhesive if needed), and regular follow-up examinations.

2. Results

Among the 44 patients, the number with suboptimal restoration outcomes was not specified, all of whom were first-time complete denture wearers. Patient outcomes regarding denture retention, masticatory function, comfort, and self-removal capability at 1 and 3 months are presented in . Patient satisfaction at 1 and 3 months follow-up was not reported.

3. Discussion

As oral health demands increase, the role of dental nursing coordination in complete denture restoration has become increasingly prominent. Since nursing quality directly affects long-term restoration outcomes, scientific nursing protocols are essential. Our data demonstrate that refined nursing management effectively improves treatment outcomes and patient satisfaction in elderly patients with low and flat alveolar ridges requiring complete denture prosthodontics.

Studies show that most complete denture patients lack knowledge about oral hygiene and post-restoration care, leading to distrust and reduced treatment compliance. In our study, outcomes including retention, comfort, self-removal capability, and nursing satisfaction all improved at 1 and 3 months, though masticatory function improvement was less pronounced, highlighting its significant impact on overall denture use.

Refined nursing emphasizes details, enhancing patient knowledge, correcting unhealthy habits, maintaining oral hygiene, and enabling early detection of oral inflammation for prompt management. Skilled doctor-nurse coordination and refined services optimize the treatment process. This approach not only improves nurses' understanding of refined concepts but also enhances family involvement, providing patients with support and encouragement that alleviates negative emotions and increases satisfaction.

In conclusion, refined nursing management improves complete denture restoration outcomes and patient satisfaction in elderly patients with low and flat alveolar ridges, demonstrating significant clinical value.

Conflict of Interest Statement: The authors declare no conflicts of interest.

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