

press. When the program finishes, it is cooled at room temperature. The gathered prosthesis is taken out of cuvette and is processed using diamond cutters, rubber discs, tissue and hair brushes using polish pastes. This prosthesis has flexibility, strength, and at the same time improve fixation and stabilization of prosthesis by using retaining clasps. Molten frames which are located in the thick of thermoplastic on the oral side on the right and on the left. Fixation is reached by using molten retaining clasps and occlusal patches.

The orthopedic treatment of 47 patients with partial absence of teeth using traditional methods (10 patients) using proposed method (37 patients) was conducted at the department of orthopedic dentistry at the Chair of Orthopedic Dentistry SamSMU. The results of prosthetic patients showed that while using thermoplastic partial dentures we can evenly distribute load on bearing teeth, stabilize on a plane and improve fixation of prosthesis by introducing molten frames with retaining clasps. Patients adapt to such prostheses within 2-3 weeks. The observation was conducted in 1, 3, 6, 12 months, the results are considerable.

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Комлев С.С.¹

¹Кандидат медицинских наук, ГБОУ ВПО Самарский Государственный Медицинский Университет Минздрава России

АСПЕКТЫ КОНСТРУИРОВАНИЯ ЗУБНЫХ РЯДОВ

Аннотация

Методы построения протетической плоскости для конструирования искусственных зубных рядов актуальный раздел ортопедической стоматологии. Целью предлагаемого способа конструирования протетической плоскости является улучшение качества и достижение наилучшего эстетического результата при изготовлении металлокерамических и безметалловых конструкций, несъемных ортопедических конструкций на имплантатах. Методика построения протетической плоскости базируется на активном использовании технического ориентира, который по эстетическим параметрам позиционируется на лице и переносится на артикулятор. Предложенный метод позволяет наиболее рационально отрегулировать высоту коронки, угол коронки, степень ангуляции и величину апроксимальных поверхностей.

Ключевые слова: протетическая плоскость, камперовская горизонталь, зрачковая линия, технический ориентир.

Komlev S. S.¹

¹MD, Samara State Medical University

ASPECTS OF DESIGNING THE DENTITIONS

Abstract

Methods of constructing the prosthetic plane for designing artificial dentitions is an actual section of orthopedic dentistry. The purpose of proposed method of constructing the prosthetic plane is to improve the quality and achieve the best esthetic result while making sintered and metal-free constructions, irremovable orthopedic constructions on implants. The technique of constructing the prosthetic plane bases on active use of technical landmark that is located on face depended on esthetic parameters and transferred into the articulator. The proposed method allows to adjust in the most efficient way the height of the crown, crown angle, the degree of angulation and the amount of interproximal surfaces.

Keywords: prosthetic plane, kamper horizontal, pupillary line, technical landmark.

Topicality

In the modern orthopedic dentistry special attention is paid to improving the designing of artificial dentitions in irremovable prostheses. Methods of constructing the prosthetic plane for designing artificial dentitions remain imperfect and laborious [2]. Although most articulators are focused on kamper horizontal which is parallel to prosthetic plane, the parallel of cutting edge of frontal group of teeth to pupillary line is not considered [3, 4].

The purpose of proposed method of constructing the prosthetic plane is to improve the quality and achieve the best esthetic result while making sintered and metal-free constructions, irremovable orthopedic constructions on implants.

Material ad methods

During the period of 2010-2015 years on the clinical base of the Chair of Orthopedic Dentistry SamSMU 61 patient with partial absence of teeth were treated. 10 of them are patients of the control group, who received treatment by traditional method and 51 of the main group, who obtained orthopedic constructions made according to proposed by us method.

The technique of constructing the prosthetic plane is carried out in several stages. After obtaining impressions doctor fixed central occlusion using recorders of occlusion bite. Defined pupillary line on the face of patient. Then, using a silicone mass fixed the position of central occlusion, fixed the technical landmark in the silicone mass parallel to pupillary line. Defined kamper horizontal on the face of patient and fixed technical landmark parallel to it in the silicone mass. By obtained impressions dental technician made models and fixed them in the articulator in the position of central occlusion. Then installed silicone blocks with technical landmarks and transferred the landmark of pupillary line and kamper horizontal to the articulator parallel to them. Constructed prosthetic plane according to these landmarks. Further modeling of orthopedic constructions conducted according to received landmarks.

Also, to achieve esthetic perfection it is necessary to represent accurately the shape and color of teeth as well as shape of dentitions. Therefore, we used a two-dimensional picture that allows to improve much the final result. Series of clinical pictures were obtained: pictures of face – full face and profile, pictures of smile, pictures with lip retraction (teeth are closed in position of central occlusion), pictures of lip retraction (teeth are slightly opened), pictures in occlusal projection, pictures of registration of occlusion bite with the technical landmarks from the full face and profile.

Results and discussion

Examination and further orthopedic treatment of 61 patients was conducted at the Chair of Orthopedic Dentistry SamSMU. Sintered prostheses have been made in traditional way for 10 patients of control group. For 51 patients (basic group) have been made: sintered constructions on dental implants – 9 patients (17,7%), sintered bridge prostheses bearing on two or more teeth – 24 patient (47%), metal-free constructions – 18 patients (35,5%).

The technique of constructing the prosthetic plane is realized in the following way. After preparing teeth for sintered and metal-free constructions we obtained impressions. While making prostheses on implants we obtained impressions with techniques of open and close spoon, using the method of making individual spoon for obtaining impressions for patients with partial absence of teeth [1]. Thereafter, defined central occlusion using wax bases with occlusal rollers or occlusion registration. Then determined pupillary line and kamper horizontal on the patient's face. Thereafter, fixed the patient's jaws in the position of central occlusion with the help of silicone mass (technical silicone, A-silicone, C-silicone). Then, technical landmarks (stick, metal rod, stylus, brashka) were set in the silicone mass so that they were parallel to pupillary line and kamper horizontal. Obtained impressions, wax bases with occlusal rollers, silicone mass with technical landmarks were transferred to dental laboratory. Using impressions, dental technician made of super plaster collapsible combined working models and fixed them in the articulator in the position of central occlusion by using wax bases with occlusal rollers and occlusion registration. The silicone block, made of silicone mass with technical landmarks, the technician set on the jaw models, transferred pupillary line and kamper horizontal to the articulator parallel to technical landmarks. Then removed the silicone block from the models. Further modeling sintered, metal-free orthopedic constructions and prosthetics on implants in front group carried out taking into account pupillary line, and in the lateral group taking into account kamper horizontal, using technical landmarks.

We analyzed the orthopedic treatment of control and basic groups of patients. While analyzing the results of control group we examined two-dimensional pictures and revealed mismatch of pupillary line with the line passing through the cutting edges of the front group teeth and the angle of divergence was 5-7 degrees. Further corrections of obtained constructions could not lead to proper results. Works were carried out on qualified and functional levels but 9 patients (90%) had esthetic defects: mismatch of cutting edge with pupillary line (88.9%) 8 patients; different height of interproximal surfaces (44.4%) 4 patients; different crown angles (22.2%) 2 patients. 51 patient of basic group received high-qualified and highly esthetic constructions. After clinical observation of patients in 3, 6, 12 months there was made a series of pictures of orthopedic constructions in the mouth and was made an X-Ray examination. Corrections did not lead to proper results of control group of patients but they were satisfied with the results, premature replacement of constructions was not required. The quality of orthopedic constructions of basic group patients remained highly esthetic.

Conclusion

This method of constructing the prosthetic plane should be used in the manufacture of sintered and metal-free constructions, when prosthetics on implants in important esthetic areas, when extensive defects and irregular atrophy of alveolar process leads to difficulties in restoring the prosthetic plane. While constructing the prosthetic plane in the lateral group kamper horizontal should be taken into account. Using this technique allows to adjust in most efficient way the height of crown, crown angle, the degree of angulation and amount of interproximal surfaces. Proposed method of constructing the prosthetic plane allows to improve the quality and achieve the best esthetic result while making orthopedic constructions. Developed method of constructing the prosthetic plane showed considerable results.

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Красовский В.О.

Доктор медицинских наук, Уфимский НИИ медицины труда и экологии человека

НОВЫЕ ПОДХОДЫ В АНАЛИЗЕ, ОЦЕНКЕ И ПРОГНОЗЕ ПРОФЕССИОНАЛЬНОГО РИСКА ЗДОРОВЬЮ РАБОТНИКОВ

Аннотация

Предложена количественная гигиеническая модель оценки, анализа, прогноза и управления профессиональными рисками здоровья работников, занятых во вредных условиях, наиболее полным образом формирующая результат удовлетворяющий новым требованиям санитарного и трудового законодательства, государственной системы охраны труда.

Ключевые слова: гигиена труда, охрана труда, профессиональные риски здоровья работающих.

Krasovskij V.O.

MD, Ufa scientific research institute of medicine of work and ecology of the person

NEW APPROACHES IN THE ANALYSIS, AN ESTIMATION AND THE FORECAST PROFESSIONAL RISK TO HEALTH OF WORKERS

Abstract

The quantitative hygienic model of an estimation, the analysis, the forecast and management of professional risks of health of the workers borrowed in harmful conditions, by the fullest image forming result meeting is offered to new requirements of the sanitary and Labour legislation, the state system of a Labour safety.

Keywords: hygiene of work, a Labour safety, professional risks of health working.

Достигнутый уровень техники и технологий до сих пор не может обеспечить абсолютную безопасность работающего человека. Любая трудовая деятельность даже при соблюдении всех требований охраны труда и промышленной санитарии не может обеспечить полную уверенность в отсутствии вреда для здоровья работника. Проблема "рисков здоровья работников" была задана по умолчанию ещё в период появления первых научных гигиенических знаний. По большому счёту, с самого своего начала, гигиеническая наука только тем и занималась, что предупреждала риски – реализацию вероятности расстройства здоровья человека. Для этого использовался "принцип порогости" - факты несоответствий гигиеническому нормативу по изолированному, отдельному фактору.

Одномерные представления о гигиеническом неблагополучии были актуальны в период, когда производственное и иное воздействие на человека содержало "ведущую вредность" [7,9] – по определению, это болезнетворный агент вызывающий наиболее яркие клинические последствия при действии остальных вредных причин и обстоятельств. В наше время производственное воздействие, в общем виде, содержит множество таких вредностей, которые поочередно сменяют друг друга в течение работы [6]. Данное обстоятельство обусловлено научно-техническим прогрессом, облегчающим труд человека и изменяющим содержание "болезней от работы". Профессиональная патология постепенно замещается "производственно-обусловленными болезнями" (Work related diseases [1]) в этиологии которых производственные причины являются только сопутствующими в развитии обычных соматических болезней трудоспособного возраста. Специфические меры профилактики таких болезней, в которых работа является только способствующей причиной, не разработаны.