CLASS PROSTHETICS WITH LOCKING FASTENERS AND THEIR COMPLICATIONS

Rakhmonova Marjona
Samarkand State Medical University student Faculty of Dentistry
scientific adviser: ***Shukurova Nodira Tillayevna***

Annotation: The development of alternative dental services has allowed patients to choose between public dental care and private clinics. Many patients suffer from partial tooth loss at a relatively young age. Restoration of various defects with clasp and microprostheses using locking fasteners is one of the alternatives to standard treatment. At the same time, the use of fixed and removable prostheses with locking fasteners from modern manufacturers requires preparation doctors and dental technicians, the availability of appropriate equipment for precision casting in foundry laboratories, compliance with manufacturing technology and the correct choice of the type of locking fastening in accordance with the characteristics of the dentition defect. The practical use of locking fasteners during dental treatment is associated with a sufficient number of complications caused by medical errors. Thus, in the domestic literature there is only one report of errors in dental prosthetics using locking fasteners. Particular issues related to improving the quality of the diagnostic and treatment process in orthopedic dentistry were also considered.

Keywords: perforation, corium wall, periodontal tissue, mechanical trauma, adjacent teeth, marginal gingiva.

An analysis of domestic and foreign literature shows that currently in the practice of orthopedic dentistry there is no unified and formulated classification of errors and complications in dental prosthetics using locking fasteners (attachments). There is also no documentation on all stages of orthopedic treatment using this type of composite structures. In addition, as practice shows, in orthopedic dentistry, when using prosthetics using locking fasteners, there is a problem of conflict situations, the problem of clinical and professional assessment of medical errors and complications has not been studied, and algorithms for solving them have not been developed. Therefore, an attempt was made to study the causes of medical errors and complications during orthopedic treatment using locking fasteners. in patients with partial absence of teeth and based on the results obtained, increase the effectiveness of orthopedics ical treatment. Along with this, the influence of medical and legal literacy of orthopedic dentists on the resolution of conflict situations when providing this type of treatment was studied:

Research methods: In order to study errors and complications at the clinical stage

of manufacturing and application. In the area of locking fastenings in orthodontics and microprosthetics, a study of patients with partially lost teeth was conducted in dental clinics of the Samarkand region for several years. Of the total number of patients examined, complications associated with defects in prostheses with locking fastenings were identified in 150. When examining the oral cavity and analyzing defects, medical errors were identified in various parts of the prosthesis, depending on the clinical stage of the prosthesis. For this purpose, 100 prostheses were manufactured using various types of attachments. In addition, 50 microprostheses with locking fastenings were manufactured. To determine the condition of permanent teeth and the alveolar system, 600 patients (350 men and 250 women) with Kennedy class 1 and 11 ejedodontic defects aged from 25 to 75 years were examined. Bilateral endodontic defects were present in 416 cases; out of 600 patients, 305 were previously equipped with prostheses with clasp and lock fixation. The reasons for replacing prostheses were pain under the base of the prosthesis, discomfort, poor fixation, unfamiliarity with the prosthesis and various complications when wearing clasp prostheses with clasp fixation. The remaining 295 patients never used removable dentures. Also, 405 patients (181 men and 224 women) aged from 20 to 65 years with dentition defects of Kennedy class II and III were examined. The defects included 230 maxillary and 175 mandibular cases. Of the 405 patients observed, 168 had previously received metal bridges, immediate dentures, or microprostheses on agtachmen. The reasons for changing the prosthesis were pain under the metal bridge due to the large gap between the teeth of the abutment, a fracture of the bridge, an unpleasant odor from under the abutment crown, pain under the base of the immediate prosthesis and various complications when wearing an attached microprosthesis. The remaining 227 patients had not previously received orthopedic treatment. According to our study, the causes of partial tooth loss were caries and its complications, visceral diseases in 52% of patients, mechanical injuries of various types in 12% of patients, and rhodontal diseases in 40% of patients. Clinical experience in the use of 195 orthodontic devices with 384 locking fasteners for prosthetics of distal and unlimited dentition defects and 88 microprostheses with 94 locking fasteners. fastenings for prosthetics of inclusive and unilateral marginal defects of the dentition showed that the main patterns and the state of the ligamentous apparatus of the periodontium, teeth and the prosthesis itself, depending on the type of locking fastening, were the main patterns. Clinical studies of intracanal closures have shown that the greatest number of errors and complications when manipulating prostheses with various types of locking fastenings arise when the type of orthopedic treatment is incorrectly chosen and the prosthesis manufacturing technique is not followed. The study showed that most often errors and complications arise from the wrong choice of the type of orthopedic treatment and non-compliance with the technique of making prostheses. Clinical studies on patients have shown that errors and

complications during orthopedic treatment arise for both objective and subjective reasons of the practical activities of specialists, especially in prosthetics with locking fasteners. Based on an analysis of the literature, a study of clinical errors in various parts of the prosthesis and our own observations, we identified all possible variants of the most common errors and complications during prosthetics with locking clamps and grouped them into.

Errors in fixing the prosthesis:

1. errors in choosing the design of composite proten with locks in the presence of inflammatory diseases of periodontal tissue, atrophin of the alveolar ridge, elasticity of the mucous membrane and mobility of the tooth-abutment:

1.2 Errors associated with incomplete treatment of chronic inflammation of the supporting root (endodontic errors);

1.3 Perforation of the corium wall, trauma to the bottom of the fossa and bifurcation of the abutment tooth (endodontic errors);

1.4 Insufficient filling of the root canal of the abutment tooth (endodontic error)

1.5. error when preparing corium for a stamped inlay;

1.6. perforation of the wall of the root of the agment tooth under the inlay,

1.7. lack of x-ray control;

1.8. damage to the marginal gingiva;

1.9. errors errors during restoration with partial absence of subgingival tissues:

1.10. damage and mechanical trauma to the abutment tooth (tooth overheating);

1.11. mechanical trauma to adjacent teeth;

1.12. violations of mixing and filling of cement in the corium cavity under the inlay and inside the crown;

1.13. No ledges under inlays and abutment crowns;

1.14. excessive gaps between the inner surface of the supporting crown and the tooth stump;

1.15. low quality of manufacturing of abutment crowns,

1.16. damage to male lock fastenings;

1.17. the use of a large number of locking fastenings with a small number of supports,

1.18. failure of the male ball during the service life of the prosthesis (improper processing, defects in the casting of the neckball, no blocking has been made);

Errors in the ratio of removable and non-removable parts of a composite prosthesis:

2.1; the choice of designs using locking fastenings, due to defects in the dentition.

2.2. Improper use of locks;

2.3. errors in determining the rigidity of the matrix and patrix of the lock fastening;

2.4. errors when processing the locking matrix socket;

2.5. formation of space between the removable part and the mucous membrane:

2.6. interlock manufacturing defects;

2.7. matrix defects between the lock matrix,

2.8. lack of interaction

2.9. incorrect choice of clasp fastening size

2.10. incorrect choice of locking type;

2.11. lack of parallelism of the lock fastening of the clasp;

2.12. lack of room for the patient's fingers when removing the prosthesis

Lack of a convenient place for gripping in the prosthesis; errors in the manufacture of the removable part of a composite prosthesis:

3.2. errors in the manufacture of the prosthesis frame:

3.3. the saddle-shaped part of the frame, visible through the base of the prosthesis;

3.3. the space between the removable part and the mucous membrane;

3.4. errors in the manufacture of the matrix socket;

3.5. poor fixation of the prosthesis:

3.6. errors in re-manufacturing the removable part of a composite prosthesis allergic

3.7 reaction;

3.8. oral mucosa.

3.9, there is insufficient space for the prosthesis to cover the matrix socket of the binel prosthesis frame, trauma or toxic damage;

3.10. lack of tight contact of the closing arms of the clasp prosthesis;

3.11. errors when restoring central occlusion using biogel prosthetics.

From the above data we can conclude that there is an insufficient level of professional skills, decrease the importance of accurate and timely maintenance of medical records, insufficient control over practical activities of dentists by persons responsible for the structure and management of dental institutions. However, this indicator is not the result of the successful work of dentists. This is due to the fact that over the past decade, the management of the republic’s dental clinics has analyzed 273 patient complaints about the inadequate provision of dental orthopedic care to the population. The analysis showed that complaints were divided into two main groups: complaints about the organizational work of the dental clinic and complaints about the low quality of dental care. It should be noted that during the same period, complaints about the organizational work of dental institutions amounted to 61% of the total number of complaints. This is due to changes in legislation in the field of health care in connection with the development of market relations, the introduction by dentists and orthopedic surgeons of modern methods of prosthetics of partial defects of tubes without the use of locking fasteners, as well as an increase in the legal literacy of patients. The majority of applicants were women. At the same time, 80% were urban

residents and 24% rural residents. At the same time, the analysis showed that the number of written complaints filed by patients was related to the quality of treatment and service and was distributed by age groups: women aged 40 to 67 years, men aged 50 to 68 years. 120 (44%) complaints were related to poor-quality orthopedic treatment, 95 (35%) complaints related to poor quality of service and non-compliance with ethical standards by medical personnel (doctors and nurses) in dental institutions. The remaining 50 complaints (19% of cases) were filed by citizens who received dental care in the orthopedic department. It is known that the quality of dental care for the population largely depends on the level of professional training and qualifications of specialists in this field. In this regard, orthopedic dentists must have sufficient knowledge about the details of the clinical application of the locking connection in biomechanics, which must be recorded in the patient's outpatient record (medical history and other medical documentation), with additional examination and diagnosis at the clinical stage. The results of a survey of orthopedic dentists show that 75% of specialist doctors use the latest methods and technologies of prosthetics in their work, but do not fully understand the intricacies of the interlocking biomechanics. According to the survey, the majority of doctors (65%), discussing with patients preliminary plans for orthopedic treatment using locks, either refuse or obtain consent for additional x-ray examination of teeth-abutments, a necessary condition for ensuring the quality of orthopedic treatment. Such examinations were recorded in outpatient records only in 13% of cases, and consent records or the patient's refusal to undergo prosthetics using clasps, 77% of specialists stated that they warn patients about possible errors or complications when carrying out orthopedic treatment using clasps. According to experts, the reasons for this are insufficient specialized qualifications of orthopedic doctors for such a complex type of prosthetics (36%), insufficient material and technical support during the treatment process (15%), insufficient equipment (8%) and insufficient time required for high-quality implementation of all stages of orthopedic treatment. Some respondents also indicated that this data is recorded in the patient's outpatient medical record. However, the results of the analysis turned out to be exactly the opposite. Not a single entry in the patient's outpatient record warned of possible errors or complications during treatment. At the same time, 70% of specialists indicated that they record all errors and complications that arose during orthopedic treatment using interlocking fixators in the outpatient chart. However, only 6% had such an entry in their patients' outpatient records. According to the survey, 90% of specialists carried out preventive examinations of their patients regarding the freedom of locking or the possibility of modification of the retractable part of the composite prosthesis, but only 24% had such a record in their outpatient records. 63% of specialists noted that they use modern methods of orthopedic treatment in their practice, and 42% of respondents use modern materials and prosthetic technologies, in particular composite structures

with locking retainers.

Conclusion. Thus, our study shows that the occurrence of errors during attachment prosthetics is associated both with insufficient qualifications of doctors and with the lack of proper organizational and methodical work on the part of the management of healthcare institutions.

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