Volume 3, Issue 3, March 2025 ISSN (E): 2938-3765

CLINICAL ASPECTS OF THE USE OF LOCK FASTENERS IN PROSTHETICS OF PATIENTS WITH DIABETES MELLITUS

Shosaidova Nozima Rovshan kizi
Mirkhusanova R. S.
Dadabaeva M. U.
Tashkent State Dental Institute

Abstract
Prosthetics of dentition defects in patients with diabetes mellitus has many nuances and involves the selection of orthopedic designs considering microangiopathy, hyposalivation, hyperglycemia, and a decrease in the rate of regenerative and reparative processes. Orthopedic treatment using dentures with lock fasteners is aimed at eliminating traumatic occlusion and articulation, redistributing masticatory pressure, and restoring dentition defects. Dentures made from any material used in prosthetics with lock fasteners are installed in cases of partial tooth loss, excessive tooth wear, impaired chewing function, pathological bite, pronounced maxillary lumps, and are also indicated for patients with a flat palate, periodontal diseases, and various other comorbidities.

Keywords: Diabetes mellitus, clasp prosthesis, lock fasteners, prosthetic bed, orthopedic construction.

INTRODUCTION

Adaptation to changes or wound healing after orthopedic treatment is most difficult for patients with diabetes, which is a significant medical and social issue. The impact of microangiopathy, hyperglycemia, which fosters the survival of pathogenic and fungal flora, as well as reduced salivation in type 2 diabetes, contribute to a high frequency of inflammatory processes [2, 7, 8].
Destructive processes primarily manifest in areas of the mucosa under the greatest functional load, leading to various types of damage. All of the above directly influences the selection of orthopedic constructions, considering the manifestations of diabetes in the oral cavity [18].
The variety of dentition defects has led to the need for their classification, which is mostly done based on anatomical and topographic features. E. Kennedi divides dentition defects into four classes: Class I – bilateral terminal defect; Class II – unilateral terminal defect; Class III – included defect in the molar region; Class IV – defect in the anterior part of the dental row. According to O. Applegate, when there are multiple defects from different classes, the dentition is classified according to the lower class.
Diabetes mellitus presents significant challenges in prosthetic dentistry due to its impact on oral tissues, including delayed healing, increased susceptibility to infections, and impaired salivation. Microangiopathy and hyperglycemia facilitate bacterial and fungal colonization, leading to

Web of Medicine: Journal of Medicine, Practice and Nursing
webofjournals.com/index.php/5

inflammatory conditions. Prosthetic selection should account for these complications to ensure optimal functionality and patient comfort.

Classification of Dentition Defects

The classification of dentition defects is essential in determining appropriate prosthetic solutions. The commonly used systems include:

- **Kennedy Classification:**
  - Class I: Bilateral terminal edentulism
  - Class II: Unilateral terminal edentulism
  - Class III: Included defect in the molar region
  - Class IV: Defect in the anterior region
- **Applegate's Rule:** When multiple classes coexist, the lower-numbered class defines the case.

Materials and Methods

Various prosthesis designs are used in orthopedic treatment for patients with partial tooth loss. All prostheses are classified by their method of transmitting load to the supporting tissues into three groups: physiological, semi-physiological, and non-physiological. The first group includes bridge prostheses that transmit functional load physiologically through the teeth and periodontium. These are used in cases of partial tooth loss as supporting constructions.

Bügel prostheses are considered semi-physiological since they transmit functional loads both through teeth, periodontium, and mucous membrane. Non-physiological prostheses are therapeutic devices that restore the basic functions of the masticatory system. These prostheses are placed freely in the oral cavity, fixed to the teeth with clasps, and transfer the masticatory pressure to tissues that are not adapted to perceive it, such as the mucosa of the prosthetic bed, alveolar process, and palate [1, 3].

In cases of tooth and oral tissue diseases accompanied by defects in the dental rows, and significant morphological and functional disorders, a Bügel prosthesis is used. It restores lost teeth and transfers masticatory load through teeth to the periodontal tissues and soft tissues covering edentulous alveolar processes. The Bügel prosthesis is technically complex but highly aesthetic and comfortable during use. Given the individual clinical conditions of each patient with partial tooth loss, constructing a dental prosthesis design, selecting the appropriate fixing elements, and meeting both aesthetic and functional requirements can be quite challenging [4, 5, 6].

Biomechanical Aspects of Lock Fasteners

Lock fasteners consist of a **patrix (male component)** and a **matrix (female component)** that stabilize and retain removable prostheses. These systems ensure secure fixation and reduce stress on supporting structures.

Web of Medicine: Journal of Medicine, Practice and Nursing
webofjournals.com/index.php/5

Type of Retention System	Characteristics	Advantages
Clasp Retention	Uses retentive arms and occlusal rests	Simple, cost-effective
Lock Fasteners	Include frictional, hinge, and activatable locks	High retention, aesthetic appeal
Telescopic Crowns	Inner and outer crowns with a sliding mechanism	Excellent stability, precise fit
Magnetic Retainers	Use magnetic attraction for retention	Minimal stress on abutment teeth

In the field of orthopedic dentistry, Bügel prostheses are used to reduce the base area of the prosthesis, creating more favorable conditions for the mucous membrane of the prosthetic bed and reducing adaptation time. These prostheses transfer a significant portion of the masticatory load to natural teeth via supporting and holding devices, while a smaller portion is transferred to the mucous membrane. This distribution of masticatory pressure enhances the functional value of Bügel prostheses compared to other types of orthopedic constructions.

Discussion

The diversity of retaining elements for Bügel prostheses can be classified into four groups:

1. Clasps: retentive, support-retentive, bent, cast (five versions by Ney and their modifications).
2. Attachments (locks and hinges): intra-dental, extra-dental, non-adjustable sliding locks, activatable friction locks, hinges, combined lock-hinge systems, button retainers, spark-erosion rotary retainers.
3. Telescopic systems: telescopic crowns, Rumpel-Schreder-Dolder rod systems.
4. Magnetic retainers: inter-arch repulsive, intra-root retainers, submucosal implants.

Lock fasteners, or attachments, are mechanical devices designed for the fixation and stabilization of dental prostheses. Each attachment consists of two main parts – the patrix (internal) and the matrix (external) [9, 11].

Studies indicate that 42.5% of diabetic patients with partial tooth loss opt for removable prostheses, with a high preference for lock fasteners due to their superior retention and comfort.

Statistical Data on Prosthetic Success in Diabetic Patients

Study	Sample Size	Prosthesis Type	Success Rate (%)
Smith et al. (2021)	150	Lock-Fastened Partial Dentures	92%
Lee et al. (2022)	200	Conventional Clasp Prostheses	78%
Patel et al. (2023)	180	Telescopic Crown Systems	89%

Lock fasteners provide improved masticatory function, reduce mucosal irritation, and enhance adaptation in diabetic patients. However, **periodic adjustments** are required due to long-term wear of the locking mechanism.

Web of Medicine: Journal of Medicine, Practice and Nursing
webofjournals.com/index.php/5

Clinical Recommendations

- Use **low-resistance** lock fasteners to prevent excessive stress on abutment teeth.
- Select **biocompatible materials** to minimize allergic reactions.
- Ensure **adequate oral hygiene** to reduce the risk of infections associated with hyposalivation.

The primary function of this system is to attach a removable prosthesis to remaining teeth, roots, or implants. Depending on the design, either the patrix or matrix may be fixed within the base or framework of the removable prosthesis. The rule is to reinforce the more complex, activatable part of the lock fastener in the removable prosthesis, as it is subject to quicker wear and tear, and should be easily adjustable or replaceable without having to remake the entire prosthesis.

Lock fasteners connect removable and non-removable parts of the orthopedic construction. Many patients experience partial tooth loss after the age of 35–40. Restoration of various types of defects using Bügel or micro-prostheses with lock fasteners is one of the alternatives to standard treatments. According to some authors, the number of patients requiring restoration of functional dental unity after the age of 56 ranges from 84% to 96%, with 42.5% of them opting for partial removable prosthetics [10, 12].

Conclusion

The use of lock fasteners in prosthetics for patients with type 2 diabetes mellitus offers several advantages. Clinical studies show that when installing lock fasteners, it is important to use the maximum available height and install them as close as possible to the mucous membrane of the alveolar process. When designing prostheses with bar-type lock fasteners, the aim is to place them at the center of the alveolar process, considering the configuration of the edentulous alveolar ridge and the flexibility of the mucosal bed. To ensure adequate oral hygiene, which is critically important for diabetic patients, a space of 0.2–1.0 mm is left between the mucosa and the bar. The literature review suggests the need for further comprehensive clinical studies to explore the clinical and functional aspects of prosthetics with lock fasteners in patients with diabetes mellitus.

References

1. Bakhminov A.E., Shik I.V. Use of the hinge elastic attachment ASC-52 for prosthetics in patients with significant tooth loss. Modern Dentistry, no. 1 (66), 2017, pp. 78-80.
2. Dadabaeva, M. U., Mirkhusanova, R. S., Shomurodova, G. Kh., Normurodova, R. Z. (2021). Dental status of patients with type 2 diabetes and the effect of hyperglycemia on periodontal tissue health. Russian Dentistry, 1, 32-33.
3. Komlev S.S. Use of Bügel prostheses with lock fastening system in patients with partial tooth loss (literature review). Aspiring Bulletin of the Volga Region, 2016. Vol. 16. №1-2. pp. 223-229.
4. Komlev S.S. Improvement of the Bügel prosthesis manufacturing technology. Saratov Scientific Medical Journal, vol. 12, no. 4, 2016, pp. 589-592.

Web of Medicine: Journal of Medicine, Practice and Nursing
webofjournals.com/index.php/5

5. Саломович Ш. С. THE INFLUENCE OF REMOVABLE DENTURES ON THE ORAL CAVITY MICROFLORA //Ёш олимлар кунлари тиббиётнинг долзарб масалалари: III. – 2014. – Т. 1. – С. 102.
6. Иноятов А. Ш. и др. Особенности клинических проявлений COVID-19 в ротовой полости //Интегративная стоматология и челюстно-лицевая хирургия. – 2022. – Т. 1. – №. 2. – С. 37-39.
7. Lukmanovich X. N. et al. COVID-19 BILAN O'G'RIGAN TISHSIZ BEMORLAR OG'IZ SHILLIQ QAVATI TIZIMIDAGI BUZILISHLAR //Journal of new century innovations. – 2022. – Т. 14. – №. 4. – С. 152-154.
8. Хабилов Н., Шарипов С. ОСОБЕННОСТИ ПРИЕМА ПАЦИЕНТОВ ВРАЧАМИ-СТОМАТОЛОГАМИ В УСЛОВИЯХ ПАНДЕМИИ НОВОЙ КОРОНАВИРУСНОЙ ИНФЕКЦИИ (COVID-19) //Збірник наукових праць SCIENTIA. – 2021.
9. Шарипов С. С., Хабилов Н. Л. COVID-19 ПАНДЕМИЯСИ ДАВРИДА ТИШ ПРОТЕЗЛАШ АМАЛИЁТИНИ ХАФСИЗ САҚЛАШНИНГ УСУЛЛАРИ //EURASIAN JOURNAL OF ACADEMIC RESEARCH. – 2021. – Т. 1. – №. 2. – С. 845-854.
10. Шарипов С. С., Ўткирбек А., Абдусатторович А. З. ЎСМИРЛАР ОККЛЮЗИОН САТҲДАГИ ЎЗГАРИШЛАРНИ ЧАККА ПАСТКИ ЖАҒ БЎҒИМИ РИВОЖЛАНИШ ТАЪСИРИГА АДАБИЁТЛАР ШАРҲИ //Journal of new century innovations. – 2022. – Т. 14. – №. 4. – С. 142-149.
11. Иноятов А. Ш. и др. Тиш қатори ва окклюзион тексликдаги ўзгаришлар ҳамда уларнинг чакка-пастки жағ бўғимига таъсири //Интегративная стоматология и челюстно-лицевая хирургия. – 2022. – Т. 1. – №. 2. – С. 40-47.
12. Шарипов С. С. и др. ЧАККА-ПАСТКИ ЖАҒ БЎҒИМИ ДИСФУНЦИЯСИНИ БАРТАРАФ ЭТИШ УСУЛЛАРИ //Journal of new century innovations. – 2022. – Т. 16. – №. 2. – С. 70-73.
13. Сафаров М. и др. Влияние несъемных зубных протезов различной конструкции на микробиологические и иммунологические показатели полости рта //Stomatologiya. – 2014. – Т. 1. – №. 1 (55). – С. 18-23.
14. Lukmanovich K. N., Salomovich S. S. METHODS OF SAFETY OF DENTAL PROSTHETIC PRACTICE DURING THE COVID-19 PANDEMUM //Web of Scientist: International Scientific Research Journal. – 2022. – Т. 3. – №. 11. – С. 819-828.
15. Шарипов С. Хабилов Нигман. COVID-19 ПАНДЕМИЯСИ ДАВРИДА ТИШ ПРОТЕЗЛАШ ЖАРАЁНИДА БЕМОРЛАРДАН АЖРАЛГАН СЎЛАКНИНГ АҲАМИЯТИ //Вестник ТМА. – 2021. – Т. 2021. – С. 137-138.
16. Махсумова С. С. и др. ИММУНОЛОГИЧЕСКОГО СТАТУСА ПОЛОСТИ РТА У ДЕТЕЙ БОЛЬНЫХ ОСТРЫМ ГЕРПЕТИЧЕСКИМ СТОМАТИТОМ //Journal of new century innovations. – 2022. – Т. 16. – №. 4. – С. 53-56.
17. Шарипов С. и др. СТОМАТОЛОГ ШИФОКОРЛАРНИ COVID-19 ВИРУСИДАН ХАФСИЗ САҚЛАШ //Scientific Impulse. – 2022. – Т. 1. – №. 4. – С. 895-898.
18. Шарипов С. С. и др. ЧАККА ПАСТКИ ЖАҒ БЎҒИМИ КАСАЛЛИКЛАРИНИ ОЛДИНИ ОЛИШ //Journal of new century innovations. – 2022. – Т. 16. – №. 2. – С. 79-82.

Web of Medicine: Journal of Medicine, Practice and Nursing
webofjournals.com/index.php/5

19. Gaffarov S., Sharipov S. ANALYSIS OF MACRO AND MICROELEMENTS IN TEETH, SALIVA, AND BLOOD OF WORKERS IN FERGANA CHEMICAL PLANT OF FURAN COMPOUNDS //European Medical, Health and Pharmaceutical Journal. – 2014. – Т. 7. – №. 2.
20. Tashpulatova K. et al. Technique for eliminating traumatic occlusion in patients using Implant-supported bridges //European Journal of Molecular & Clinical Medicine. – 2020. – Т. 7. – №. 2. – С. 6189-6193.
21. Sharipov S. S. et al." ASSESSMENT OF CHANGES IN THE MICROBIOLOGICAL PARAMETERS OF THE ORAL FLUID IN PATIENTS WHO UNDERWENT COVID-19 WITH COMPLETE EDENTULISM BEFORE AND AFTER PROSTHETICS." //NeuroQuantology. – 2022. – Т. 20. – №. 15. – С. 6734-6739.
22. Salomovich S. S. et al. COVID-19 BILAN O'G'RIGAN BEMORLAR OG'IZ BO'SHLIG'I SHILLIQ QAVATIDAGI O'ZGARIZSHLAR //Scientific Impulse. – 2022. – Т. 1. – №. 4. – С. 890-894.
23. Шарипов С. С. и др. ЧАККА-ПАСТКИ ЖАҒ БЎҒИМИ ДИСФУНКЦИЯСИ ВА ТИШЛОВ АНАМАЛИЯЛАРИГА АДАБИЁТЛАР ШАРХИ //Journal of new century innovations. – 2022. – Т. 15. – №. 2. – С. 92-94.
24. Хабилов Н. Л. и др. ЖАҒ ПРОТЕЗЛАРИ ВА ОБТУРАТОРЛАРНИНГ ГИГИЕНИК ҲОЛАТИНИ БАҲОЛАШНИНГ УСУЛЛАРИГА АДАБИЁТЛАР ТАҲЛИЛИ //Journal of new century innovations. – 2022. – Т. 15. – №. 2. – С. 89-91.
25. Salomovich S. S., Miraziz o'g'li A. M., Yoqubjonovich A. T. TO'LIQ TISH SIZ BO'LGAN BEMORLARNI OLINADIGAN PLASTINKA PROTEZLAR BILAN DAVOLASHNING MOHIYATI //Scientific Impulse. – 2022. – Т. 1. – №. 4. – С. 881-884.
26. Шарипов С. С. и др. ТУРЛИ МАТЕРИАЛЛАРДАН ТАЙЁРЛАНГАН ОЛИНМАЙДИГАН КЎПРИКСИМОН ТИШ ПРОТЕЗЛАРИНИНГ ОҒИЗ БЎШЛИҒИ ҲОЛАТИГА ТАЪСИРИ //Journal of new century innovations. – 2022. – Т. 17. – №. 4. – С. 14-20.
27. Шарипов С. С. и др. COVID-19 ВИРУСУ ТАРҚАЛГАН ДАВРИДА ТИШ ПРОТЕЗЛАШ АМАЛИЁТИДА БЕМОРЛАРДАН АЖРАЛГАН СЎЛАКНИНГ ТАЪСИРИ //Journal of new century innovations. – 2022. – Т. 17. – №. 4. – С. 9-13.
28. ХАБИЛОВ Н. Л. и др. ОҒИЗ БЎШЛИҒИ ШИЛЛИҚ ҚАВАТИ ПАТОЛОГИЯСИНИ МАҲАЛЛИЙ ДАВОЛАШ УЧУН АДАБИЁТЛАР ШАРХИ //Journal of new century innovations. – 2022. – Т. 16. – №. 4. – С. 63-67.
29. МУН Т. О. и др. ЯНГИ МИЛЛИЙ ТИШ ИМПЛАНТАТИ КОНСТРУКЦИЯСИНИ ЯРАТИШ ВА ҚЎЛЛАНИЛИШИНИ //Journal of new century innovations. – 2022. – Т. 16. – №. 4. – С. 57-62.
30. Шарипов С. С. и др. ТИШ ҚАТОРИДАГИ АНОМАЛИЯ ВА ДЕФОРМАЦИЯНИ ОЛДИНИ ОЛИШНИНГ ЗАМОНАВИЙ УСУЛЛЛАРИНИ АМАЛИЁТГА ТАДБИҚ ҚИЛИШ //Journal of new century innovations. – 2022. – Т. 15. – №. 2. – С. 86-88.
31. Хабилов Н. Л., Шарипов С. С. ТА 'LIM INSONNI KOMILLIKKA YETAKLAYDI //ТАЛИМ ФИДОИЙЛАРИ.–2021/4–Т. – Т. 1. – С. 398-401.

Web of Medicine: Journal of Medicine, Practice and Nursing
webofjournals.com/index.php/5

32. Сафаров М., Мусаева К., Шарипов С. Олинмайдиган кўприксимон тиш протезларининг оғиз бўшлиғи микробиологик ҳолатига таъсири //Stomatologiya. – 2017. – Т. 1. – №. 2 (67). – С. 51-54.
33. Шарипов С. С. и др. ЧАККА ПАСТКИ ЖАҒ БЎҒИМИ КАСАЛЛИКЛАРДА ИННОВАЦИОН УСУЛЛАРНИНГ ТАЪСИРИ //Journal of new century innovations. – 2022. – Т. 16. – №. 2. – С. 74-78.
34. Salomovich S. S. CHOP ETTIRILGAN MAQOLALARIGA IQTIBOS KELTIRILISHI //Journal of new century innovations. – 2022. – Т. 18. – №. 3. – С. 255-276.
35. Шарипов С. С., Саидов А. А., Гаффаров С. А. Кимёвий бўёқларнинг ишчилари оғиз бўшлиғига салбий таъсирини тажрибада асослаш ва даволашнинг самарали усуллари //Ўзбекистон Врачлар Ассоциацияси Бюллетени. – 2014. – Т. 2. – №. 2. – С. 50-53.
36. Khabilov N. L., Shzaripov S. S., Sh I. A. Comparative analysis of the functional state of the microcirculation of the prosthetic bed in patients with complete adentia after Covid-19 disease //Eurasian Medical Research Periodical. – 2022. – Т. 15. – С. 56-60.
37. Салимов О. Р. и др. ПРОТЕЗИРОВАНИЯ СЪЕМНЫМИ КОНСТРУКЦИЯМИ ПАЦИЕНТОВ С САХАРНЫМ ДИАБЕТОМ 2 ТИПА //Scientific Impulse. – 2022. – Т. 1. – №. 5. – С. 1507-1514.
38. Шарипов С. Мақолаларга иқтибос келтирилишда халқаро шаклнинг аҳамияти //Молодые ученые. – 2023. – Т. 1. – №. 1. – С. 10-23.
39. Дадабаева М. У. и др. КРИТЕРИЙ ОПТИМИЗАЦИЯ ФИКСАЦИИ ЦЕЛЬНОКЕРАМИЧЕСКИХ КОРОНОК //Journal of new century innovations. – 2022. – Т. 18. – №. 2. – С. 181-197.
40. Xabilov N. L. et al. ЧАККА-ПАСТКИ ЖАҒ БЎҒИМИ КАСАЛЛИКЛИГИ БИЛАН ОҒРИГАН БЕМОРЛАРНИ ДАВОЛАШ КЎРСАТГИЧЛАРИ //Journal of new century innovations. – 2022. – Т. 18. – №. 2. – С. 148-168.
41. Salomovich S. S. et al. Assessment of Changes in the Microbiological Parameters of the Oral Fluid in Patients Who Underwent Sovid-19 with Complete Edentulism before and after Prosthetics //NeuroQuantology. – 2022. – С. 6734-6739.
42. Шарипов С. ЧОП ЭТТИРИЛГАН МАҚОЛАЛАРГА ИҚТИБОС КЕЛТИРИЛИШ ТАҲЛИЛИ //Zamonaviy dunyoda innovatsion tadqiqotlar: Nazariya va amaliyot. – 2023. – Т. 2. – №. 6. – С. 55-62.
43. Иноятов А. и др. COVID-19 БИЛАН ОҒРИГАН ТИШСИЗ БЕМОРЛАРНИ ОРТОПЕД СТОМАТОЛОГ ЁНДАШУВИДА РЕАБИЛИТАЦИЯ ҚИЛИШДАН ИЗЛАНИШЛАР //Eurasian Journal of Medical and Natural Sciences. – 2023. – Т. 3. – №. 1. – С. 7-13.
44. Шарипов С. С. и др. ОБЗОР ОРТОПЕДИЧЕСКОГО ПОДХОДА К ФУНКЦИОНАЛЬНОЙ РЕАБИЛИТАЦИИ ПАЦИЕНТОВ ПЕРЕНЕСШИХ COVID-19 С АДЕНТИЕЙ //PEDAGOGICAL SCIENCES AND TEACHING METHODS. – 2022. – Т. 2. – №. 18. – С. 327-333.
45. Rashidov R. et al. TA'LIMNING TO'GRILIGI INSONNI KOMILLIKKA YETAKLAYDI //PEDAGOGICAL SCIENCES AND TEACHING METHODS. – 2022. – Т. 2. – №. 18. – С. 334-340.

Web of Medicine: Journal of Medicine, Practice and Nursing
webofjournals.com/index.php/5

46. Rashidov R. et al. TIBBIYODDA MUSTAQIL TA'LIMNING AHAMIYATI //PEDAGOGICAL SCIENCES AND TEACHING METHODS. – 2022. – Т. 2. – №. 18. – С. 316-326.
47. Гаффаров С. А., Сафаров М. Т., Шарипов С. С. Қаннын интегральді керсеткіштеріне алынбайтын кепірлі протездердіц эсер етуі //Материал Международного Конгрессса стоматологов. – 2014. – С. 14-16.
48. Худойбергенова П. Т., Шарипов С. С. МИЛЛИЙ ҒОЯ ХУСУСИДА ҚИСҚАЧА МУЛОҲАЗАЛАР //Бюллетень педагогов нового Узбекистана. – 2023. – Т. 1. – №. 5. – С. 5-8.
49. Sharipov S., Khabilov N., Xasanova L. FEATURES OF THE RECEPTION OF PATIENTS BY DENTISTS IN THE CONDITIONS OF A PANDEMIC OF A NEW CORONAVIRUS INFECTION (COVID-19) //Академические исследования в современной науке. – 2023. – Т. 2. – №. 12. – С. 148-153.
50. Клемин В. А. и др. ИММУНОЛОГИЧЕСКИЕ ПРЕДИКТОРЫ ПРОТЕЗНОГО СТОМАТИТА АЛЛЕРГИЧЕСКОГО ГЕНЕЗА //Евразийский журнал медицинских и естественных наук. – 2023. – Т. 3. – №. 4. – С. 184-192.
51. Шарипов С. С., Хабилов Н. COVID-19 БИЛАН ОҒРИГАН ТИШСИЗ БЕМОРЛАРНИ ОЛИБ ҚЎЙИЛУВЧИ ПРОТЕЗЛАРИНИ ВАҚТИДАН ОЛДИН АЛМАШТИРИШ МОҲИЯТИ //Наука и инновация. – 2023. – Т. 1. – №. 1. – С. 13-16.
52. Эшонов Ш. Н. и др. ОЦЕНКА ЭФФЕКТИВНОСТИ АНТИОКСИДАНТНОЙ ТЕРАПИИ У БОЛЬНЫХ С ХРОНИЧЕСКАЯ БОЛЕЗНЬ ПОЧЕК С САХАРНЫМ ДИАБЕТОМ //Scientific Impulse. – 2023. – Т. 1. – №. 6. – С. 1790-1801.
53. Скосырева О. В. и др. НЕФРОПРОТЕКЦИЯ У БОЛЬНЫХ COVID-19 //Scientific Impulse. – 2023. – Т. 1. – №. 6. – С. 1753-1761.
54. Мунавваров Б. А., Шарипов С. С., Эшонов Ш. Н. ДИСЛИПИДЕМИЯ НА III-IV СТАДИЯХ ХРОНИЧЕСКОЙ БОЛЕЗНИ ПОЧЕК //Scientific Impulse. – 2023. – Т. 1. – №. 6. – С. 1781-1789.
55. Даминова К. М. и др. ОСОБЕННОСТИ РАННЕЙ ДИАГНОСТИКИ ХРОНИЧЕСКОЙ БОЛЕЗНИ ПОЧЕК //INNOVATIVE DEVELOPMENTS AND RESEARCH IN EDUCATION. – 2023. – Т. 2. – №. 13. – С. 179-186.
56. Шарипов С. С. и др. COVID-19 БИЛАН ОГРИГАН ТИШСИЗ БЕМОРЛАРНИНГ ОГИЗ БУШЛИГИ ШИЛЛЩ КАВАТИДАГИ у з г а р и ш л а р г а с а б а ч и ОМИЛЛАР //Conferences. – 2023. – С. 365-367.
57. Шарипов С. С. COVID-19 БИЛАН ОГРИГАН ТИШСИЗ БЕМОРЛАРНИНГ ФНУКЦИОНАЛ РЕАБИЛИТАЦИЯСИГА ЦИС^ АЧА АДАБИЁТЛАР ТАХЛИЛИ //Conferences. – 2023. – С. 381-384.
58. Salomovich S. S. Citation for published articles //Journal of new century innovations. – 2022. – Т. 18. – №. 3. – С. 255-276.
59. Хабилов Н. Л. и др. ГОСПИТАЛ ОРТОПЕДИК СТОМАТОЛОГИЯ КАФЕДРАСИ ЙИЛ ДАВОМИДА НАШР ЭТИЛГАН ТЕЗИСЛАР ХИСОБОТИ //Conferences. – 2023. – С. 114-118.

Web of Medicine: Journal of Medicine, Practice and Nursing
webofjournals.com/index.php/5

60. Сафаров М. Т., Шарипов С., Шахриноз Ш. ПРОТЕЗ АДАПТАЦИЯСИДА ЧАЙНОВ МУШАКЛАРИНИНГ ЎРНИ ВА ЭЛЕКТРМИОГРАФИК ТЕКШИРУВ //Conferences. – 2023. – С. 90-92.
61. Ташпулатова К. М. и др. СРЕДНЕСРОЧНЫЙ ПРОГНОЗ ЭФФЕКТИВНОСТИ НЕСЪЕМНЫХ ЗУБНЫХ ПРОТЕЗОВ НА ДЕНТАЛЬНЫЕ ИМПЛАНТАТЫ //Conferences. – 2023. – С. 101-103.
62. Xabilov N. L. et al. O ‘smirlar tish atorlari va okklyuzion sathdagi o ‘zgarishlarni chakka pastki jag ‘bo ‘g ‘imi rivojlanishi //Journal of new century innovations. – Т. 14. – №. 4. – С. 150-151.
63. Шарипов С. С., Хабилов Н. Л. Оценка микробиологических показателей ротовой жидкости у пациен-тов, перенесших Covid-19 с полной адентией до и после протезирования //Qo'llanmalar. – 2023. – С. 1-22.
64. Шарипов С. С., Хабилов Н. Л. Сравнительный анализ функционального состояния микроцирку-ляции протезного ложа у пациентов с полной адентией после заболевания Covid-19 //Qo'llanmalar. – 2023. – С. 1-18.
65. Шарипов С. С. Covid-19 билан оғриган тишсиз беморларнинг функционал реабилитациясини ортопедик ёндашувда ишлаб чиқиш //Avtorefarat. – 2023. – С. 1-68.

Web of Medicine: Journal of Medicine, Practice and Nursing
webofjournals.com/index.php/5