

## TELEDENTISTRY EXAMINATION AFTER SURGICAL EXTRACTION OF THIRD MOLARS

*Kosta Todorović<sup>1,2</sup>, Milan Miladinović<sup>3</sup>, Filip Djordjević<sup>3</sup>, Danijela Staletović<sup>3</sup>, Simon Nikolić<sup>4</sup>, Marko Matvijenko<sup>5</sup>, Rastko Ivković<sup>5,6</sup>, Zdenka Stojanović<sup>7</sup>*

One of the most commonly performed surgical interventions in dentistry is the third molar extraction. This procedure may be performed routinely, but it may also be associated with complications. Numerous variations in the postoperative course have been described. Our investigation aimed to examine the reliability of postoperative follow-up of surgical third molar extraction using the method of teledentistry via patients' smartphone devices.

We performed a randomized experimental study. The follow-up examination undertaken a day after the surgical procedure consisted of two parts: a virtual one and an in-person one. Our digital examination involved photographs taken by the patients themselves and an electronic survey. The oral surgeon first evaluated the digital follow-up results before conducting the patient in-person examination. The results were processed and compared using Cohen's kappa coefficient, Z test and McNemar's  $\chi^2$  test for the statistical significance cut-off value of  $p = 0.05$ .

In total, 40 follow-up examinations (100%) were performed. In 39 (98%) examinations, the results obtained with in-person and virtual approaches were identical. In 7 cases (25%), the indications for a change in therapy were presented by both methods. The actual number of therapy changes recommended was 10 (100%) for the in-person approach and 9 (100%) for the teledentistry method. The following agreement values were obtained: sensitivity: 0.9750; specificity: 0.9750; efficiency: 0.9750; and Cohen's Kappa: 0.9500. These values suggested an almost perfect agreement.

The diagnostic differences between patient recovery follow-up using the virtual and in-person approaches after third molar surgical extraction were not statistically significant. In that regard, postoperative course follow-up may rely on contemporary digital communication technologies with a high degree of confidence.

*Acta Medica Medianae 2024;63(4):12–19.*

**Key words:** teledentistry, third molar, follow-up examination, pericoronitis, edema

<sup>1</sup>University of Niš, Faculty of Medicine, Department of Maxillofacial Surgery and Oral surgery, Niš, Serbia

<sup>2</sup>Dental Medicine Clinic, Niš, Serbia

<sup>3</sup>University of Priština with a Temporary Seat in Kosovska Mitrovica, Faculty of Medicine, Department of Dentistry, Kosovska Mitrovica, Serbia

<sup>4</sup>University of Priština with a Temporary Seat in Kosovska Mitrovica, Faculty of Medicine, Department of Internal Medicine, Kosovska Mitrovica, Serbia

<sup>5</sup>University of Priština with a Temporary Seat in Kosovska Mitrovica, Faculty of Medicine, Kosovska Mitrovica, Republic of Serbia

<sup>6</sup>Dentistry Clinic "Jelenković" Belgrade, Belgrade, Republic of Serbia

<sup>7</sup>Military Medical Academy, Dentistry Clinic, Department of Jaw Orthopedics, Belgrade, Republic of Serbia

Contact: Prof. Dr. Milan Miladinović  
Anri Dinana b.b., 38220 Kosovska Mitrovica, Serbia  
E-mail: milanbetter@gmail.com

### Introduction

Extraction of the third molars is one of the most common surgical interventions in dentistry. The reasons for third molar extraction may be different (1). They range from dental crowding, then pericoronitis, less and more serious infections caused by these teeth, all the way to complex pathological changes associated with them (2–4). The course of this surgical intervention may be routine or is accompanied by complications; moreover, numerous complications in the postoperative period have been described as well (3–6). Nevertheless, most of these interventions have a normal postoperative period and in most cases, there is no need to change the planned postoperative therapy (7–9). In order to monitor the course of recovery and, if required, to change timely the postoperative therapy, the patients are examined 24 hours after the surgery (10–12).

On the other hand, the ever-increasing presence of digital computerized and telecommunication technologies among the

population has made possible the expansion of telemedicine capacities in various areas of medicine. In some of them, it has already become the standard, and most of them are currently witnessing expansion in that regard (13, 14). Teledentistry, i.e. telemedicine applied in dentistry, offers numerous advantages reflected above all in the availability of distant dentistry consultations, better patient management and significant savings of both time and resources (15, 16).

### Aim

The aim of our study was to examine the reliability of postoperative follow-up of surgical extraction of third molars using the teledentistry method based on patients' smartphones.

### Material and Methods

Our investigation was a randomized experimental study. The study was approved by the Ethics Committee of the Dental Medicine Clinic in Niš and the Ethics Committee of the Faculty of Medicine in Priština—Kosovska Mitrovica. The study took place at the Dental Medicine Clinic in Niš and the Dentistry Clinic of the Faculty of Medicine in Priština—Kosovska Mitrovica. The study enrolled 37 adult patients of both genders. There were 43 (100%) surgically extracted third molars, 24 (56%) in men and 19 (44%) in women. Out of the total number, 15 teeth (35%) were upper jaw third molars, and 28 teeth (65%) were lower jaw third molars. Altogether, there

were 40 (93%) postoperative follow-ups, 22 (55%) performed in men and 18 (45%) in women. Three (7%) follow-ups could not be performed since the patients did not turn up (Tables 1 and 2).

The follow-up examination consisted of two parts. In the first part, the patient was photographed by any present person, usually a patient's escort. The photographs were taken according to the procedure guidelines, but without any prior training of the person who took the photograph. The guidelines involved three extraoral patient photographs: two profiles and one en face, in order to visualize well the extraoral changes (swelling, above all). Then, a couple of photographs were taken of the inside of the mouth, in order to visualize the postoperative area and intraoral tissue in general.

The patients then were asked to fill out the digital survey (Figure 1). Together with the photographs taken, it was uploaded via a local network to the local computer server. The server started an especially created application in support of this study (Figure 2). The server fulfilled all the necessary standards and criteria, including the encryption, authorization and authentication features. In such a way performed digital control examination was then sent to a reviewer (Figure 3). The reviewer made the decision as to the local finding assessment, postoperative recovery of the patient and further therapy (Table 3). The second part of the examination involved a conventional direct, in-person examination of the patient.

**Table 1.** Number of extractions and follow-ups

	Number of extractions	%	Number of follow-ups	%	Number of missed follow-ups	%
	43	100%	40	93%	3	7%
<b>Men</b>	24	56%	22	55%	2	67%
<b>Women</b>	19	44%	18	45%	1	33%

**Table 2.** Third molar distribution according to their anatomical sites

	Left		Right		Total	
<b>Upper jaw</b>	7	47%	8	53%	15	35%
<b>Lower jaw</b>	16	57%	12	43%	28	65%
<b>TOTAL</b>	23	54%	20	46%	43	100%

**Table 3.** Agreement between two methods (in-person and teledentistry) concerning prescribed postoperative therapy after follow-up examination

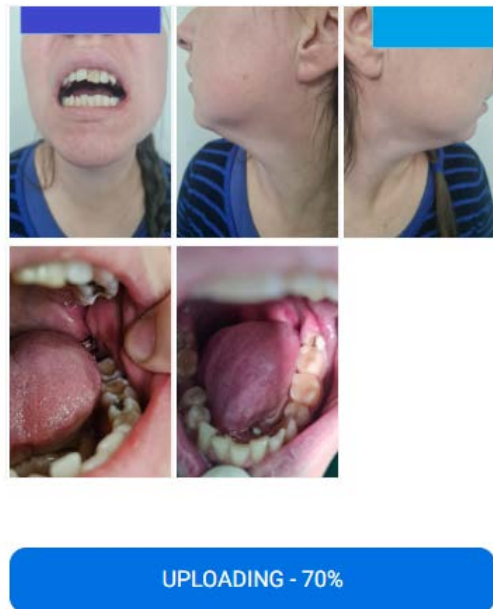
Parameters	In-person n/N (%)	Teledentistry n/N (%)
Analyzed cases	40/43 (93)	40/43 (93)
identical findings	39/40 (98)	39/40 (98)
different findings	1/40 (2)	1/40 (2)
Additional treatments suggested (cases)	7/40 (17)	6/40 (15)
total number of suggestions	10 (100)	9 (100)
removal of one or more sutures	1/10 (10)	1/9 (11)
drain placement or removal	3/10 (30)	3/9 (33)
correction of antibiotic therapy	2/10 (20)	2/9 (22)
correction of antioedematous therapy	4/10 (40)	3/9 (33)
n—number of cases; N—total number		

## QUESTIONNAIRE FOR THE PATIENT

Question	Patient response
How are you today?	Very well
Do you regularly take your prescribed therapy?	Yes
Is your swelling enlarging or shrinking?	Shrinking
Was there any bleeding?	No
Are there any discomforts or similar complaints? If there are, name and describe them.	No
Other comments:	No
Next	

**Figure 1.** Digital questionnaire on patients' smartphones

## PATIENT IMAGES



**Figure 2.** The upload of photos from smartphones to the local computer server

Case Number - #039025

Patient Question:	Patient Response:
How are you today?	Very well
Do you regularly take your prescribed therapy?	Yes
Is your swelling enlarging or shrinking?	Shrinking
Was there any bleeding?	No
Are there any discomforts or similar complaints? If there are, name and describe them.	No
Other comments:	No





Kosta T.  
Logout

**Figure 3.** Digital control examination on a desktop PC of the reviewer

The degree of diagnostic accuracy was determined by the following scale:

- correct—if the teledentistry postoperative diagnosis was identical to the primary one, or if it was made as an acceptable differential diagnosis;
- incorrect—if the teledentistry postoperative diagnosis was completely different from the primary one, or the diagnosis was not made at all.

Statistical data processing was performed using the MedCalc software ver 18.6 for Windows. The degree of agreement between the examinations was determined, as well as sensitivity (SE), specificity (SP) and efficacy (EFF). Cohen's kappa coefficient was calculated, Z test comparison was done, as well as the testing with

McNemar's  $\chi^2$  test for the statistical significance cut-off of  $p = 0.05$ .

## Results

In total, 40 (100%) control examinations were performed. In 39 (98%) examinations the results obtained with digital teledentistry method were identical to in-person patient examination results. In 1 examination (2%), the results were different. A change or supplementation of therapy at the first control examination was made in 7 cases (25%) with both methods. It should be mentioned that the total number of therapy changes with the in-person method was 10 (100%), while with the teledentistry method, it was 9 (100%). With the in-person method the following indications were made: in 1 case (10%), suture removal; in 3 cases (30%), drain placement or removal; in 2 cases (20%), change of antibiotic therapy; and in 4 cases (40%), change of antiedema therapy. With the teledentistry method, the following indications were made: in 1 case (11%), suture removal; in 3 cases (33%), drain placement or removal; in 2 cases (22%), change of antibiotic therapy; and in 3 cases (33%), change of antiedema therapy.

Out of 40 follow-up examinations (100%), an agreement between the in-person method and teledentistry was detected in 39 cases (98%). The following statistical parameters should be reported as well: Sensitivity (SE): 0.9750 (95% CI: 0.8684–0.9994), specificity (SP): 0.9750 (95% CI: 0.8684–0.9994), efficiency: (Correct classification rate) = 0.9750 (95% CI: 0.9126–0.9970). Cohen's Kappa: 0.9500 (95% CI: 0.8816–1.0184). Test of Ho: Kappa = 0:  $z = 8.50$ ,  $p = 0.0000$  t.t.t. Observed agreement: 0.9750 (95% CI: 0.9126–0.9970), chance agreement: 0.5000 (95% CI: 0.0000–0.0000), positive agreement: 0.9750 (95% CI: 0.9404–1.0096), negative agreement: 0.9750 (95% CI: 0.9404–1.0096). The obtained agreement values suggested an almost perfect agreement. The diagnostic differences were not statistically significant in our study.

## Discussion

The idea that teledentistry can be used in follow-up examinations in patients who have undergone surgical third molar extraction parallels the advances made in digital and telecommunication technologies. In its essence, it is comfortable for the patients in the sense that visits to their dentistry clinics are avoided, together with everything associated with the visits: traveling, waiting, expenses, additional exposure to the risk of contracting COVID-19 and other diseases (17). This makes great sense for the patients living at a distance from the place where oral surgery interventions are performed, but also for those who have to travel immediately

after the intervention (18, 19). If we take into account the absence of health professionals from work to perform in-person control examinations, the savings and other benefits are significantly greater (20).

The control examination a day after the surgical third molar extraction is necessary for a normal postoperative course (without adverse events) (21, 22). In general, examinations using the methods of telemedicine are on the increase, especially after the COVID-19 epidemic (23–25). In dentoalveolar surgery, follow-up examinations using the method of teledentistry can be successfully implemented in the follow-up of patient recovery after a dental root resection. Our results agree with the results obtained by Miladinović et al. (26). They established that in-person follow-up examinations a day after the root tip resection can be successfully replaced by distant *store and forward* telemedicine examinations. Using an Android application, Krishna et al. (27) were able to monitor patient recovery after routine dental extraction, with an additional ability to provide distant instructions. They found a significant decrease in complication rates following dental extractions.

Gangwani et al. (28) reported successful use of teledentistry consultations in oral and maxillofacial surgery (OMS) procedures, especially in dentoalveolar surgery, in the domains of preoperative patient preparation and postoperative dental care. Kummerow et al. (29) followed the postoperative recovery of patients in general surgery, finding that 68% of doctors and patients thought that it was as good as a visit to a clinic. Further, 24% of them preferred clinical examination, while 8% preferred online examination. Crummey et al. (30) performed a study investigating video-assisted consultations in oral surgery patients. They found that the patients were satisfied with such examinations, but that further standardization of the examinations was required. Jiang et al. (31) established that the telemedicine method in patients undergoing total knee arthroplasty was superior to the classical face-to-face rehabilitation method. In contrast to the above-mentioned authors whose results agree with our results, Walker et al. (32) obtained rather different results in their study. In children with surgically treated clefts, they found that postoperative control examinations could not be successfully performed via electronic ways. As the reason for this, they reported essentially technical problems.

Heimes et al. (33) reported that teledentistry examinations after minor dental surgery interventions were preferred by 83.3% of patients, while 16.7% of patients preferred to adhere to conventional dental aftercare. They also found that there was no statistically significant difference regarding the frequency of symptoms or complication rate. Qari et al. (34) compared the experience of patients at follow-up examinations during the treatment of diseases affecting the temporomandibular joint. They were unable to

identify any significant differences in patient experience with virtual and conventional approach

and thus concluded that control examinations could be performed virtually with a high degree of quality. Difficulties in that regard could be encountered only with older patients, without adequate knowledge in working with virtual platforms.

All these results obtained by reputable authors are in line with our results, except for the study by Walker et al. (32). It is conspicuous that the number of studies dealing with direct comparisons is rather low, which can be explained by the still insufficiently developed presence of teledentistry in the practice of dentistry.

However, the benefits of digital communication technologies in the everyday

practice of dentistry are constantly becoming clearly visible. The COVID-19 pandemic perhaps gave the process a special propulsive force.

## Conclusion

The perspectives of teledentistry in the follow-up of dental patients are bright. In particular, in the monitoring of the postoperative course after surgical extraction of third molars, the method of teledentistry can be used with a high degree of reliability, i.e., there are no statistically significant differences between the virtual follow-up approach and conventional in-person patient examination.

## References

1. Bogdán S, Bérczy K, Hardi E, Kaposvári I, Németh Z. A bölcsességfogak sebészete 2023-ban [Wisdom tooth surgery in 2023.]. *Orv Hetil* 2023 ;164(48):1887-94. [\[CrossRef\]](#) [\[PubMed\]](#)
2. Shirzadeh A, Bagheri Shirvan S, Alizadeh O, Grillo R, Vida M, Samieirad S. What is the Most Prevalent Type of Third Molar Impaction in Patients with Pericoronitis? *World J Plast Surg* 2023;12(2):57-63. [\[CrossRef\]](#) [\[PubMed\]](#)
3. Agrawal A, Yadav A, Chandel S, Singh N, Singhal A. Wisdom tooth--complications in extraction. *J Contemp Dent Pract* 2014;15(1):34-6. [\[CrossRef\]](#) [\[PubMed\]](#)
4. Muhonen A, Ventä I, Ylipaavalniemi P. Factors predisposing to postoperative complications related to wisdom tooth surgery among university students. *J Am Coll Health* 1997;46(1):39-42. [\[CrossRef\]](#) [\[PubMed\]](#)
5. Kiencało A, Jamka-Kasprzyk M, Panaś M, Wysznińska-Pawełec G. Analysis of complications after the removal of 339 third molars. *Dent Med Probl* 2021;58(1):75-80. [\[CrossRef\]](#) [\[PubMed\]](#)
6. Fehlhofer J, Fernandez-Ulrich C, Wohlers A, Kesting MR, Rau A, Buchbender M. A Retrospective Analysis of Postoperative Abscess Formation Following Wisdom Tooth Removal and Their Clinical Condition and Localization. *J Contemp Dent Pract* 2022;23(11):1079-84. [\[CrossRef\]](#) [\[PubMed\]](#)
7. Lodi G, Figini L, Sardella A, Carrassi A, Del Fabbro M, Furness S. Antibiotics to prevent complications following tooth extractions. *Cochrane Database Syst Rev* 2012;11:CD003811. [\[CrossRef\]](#) [\[PubMed\]](#)
8. Cho H, Lynham AJ, Hsu E. Postoperative interventions to reduce inflammatory complications after third molar surgery: review of the current evidence. *Aust Dent J* 2017;62(4):412-9. [\[CrossRef\]](#) [\[PubMed\]](#)
9. Gay-Escoda C, Sánchez-Torres A, Borrás-Ferreres J, Valmaseda-Castellón E. Third molar surgical difficulty scales: systematic review and preoperative assessment form. *Med Oral Patol Oral Cir Bucal* 2022;27(1):e68-e76. [\[CrossRef\]](#) [\[PubMed\]](#)
10. Cullingham P, Harrison C, Patel N. Monitoring patient complications. *Oral Surg* 2016; 9(1): 10-4. [\[CrossRef\]](#)
11. Schwartz AB, Larson EL. Antibiotic prophylaxis and postoperative complications after tooth extraction and implant placement: a review of the literature. *J Dent* 2007;35(12):881-8. [\[CrossRef\]](#) [\[PubMed\]](#)
12. Haj Yahya B, Chaushu G, Hamzani Y. Evaluation of wound healing following surgical extractions using the IPR Scale. *Int Dent J* 2020;71(2):133-9. [\[CrossRef\]](#) [\[PubMed\]](#)
13. Madej M, Sasiadek MJ. The growing role of telemedicine - possibilities and regulations concerning teleradiology in Poland. *Pol J Radiol* 2023;88:e535-45. [\[CrossRef\]](#) [\[PubMed\]](#)
14. Park JH, Lee MJ, Tsai MH, Shih HJ, Chang J. Rural, Regional, Racial Disparities in Telemedicine Use During the COVID-19 Pandemic Among US Adults: 2021 National Health Interview Survey (NHIS). *Patient Prefer Adherence* 2023;17:3477-87. [\[CrossRef\]](#) [\[PubMed\]](#)
15. Özveren N, Sevinç B, Sarıaloğlu Güngör A, Baltacı E, Serindere G, Özgür Ö. Evaluation of knowledge and awareness about teledentistry among dentists and patients living in Turkey. *Dent Med Probl*. 2023 Oct-Dec;60(4):593-599. [\[CrossRef\]](#) [\[PubMed\]](#)
16. Németh O, Uhrin E, Girasek E, Boros J, Györfy Z. The impact of digital healthcare and teledentistry on dentistry in the 21st Century: a survey of Hungarian dentists. *BMC Oral Health* 2023;23(1):1025. [\[CrossRef\]](#) [\[PubMed\]](#)

17. Mahdavi A, Atlasi R, Naemi R. Teledentistry during COVID-19 pandemic: scientometric and content analysis approach. *BMC Health Serv Res* 2022;22(1):1111. [\[CrossRef\]](#) [\[PubMed\]](#)
18. Chaudhary FA, Ahmad B, Javed MQ, Mustafa S, Fazal A, Javaid MM, Siddiqui AA, Alam MK, Ud Din S. Teledentistry awareness, its usefulness, and challenges among dental professionals in Pakistan and Saudi Arabia. *Digit Health* 2022;8:20552076221089776. [\[CrossRef\]](#) [\[PubMed\]](#)
19. Ward MM, Bhagianadh D, Ullrich F, Merchant KAS, Meyer CL, Wovcha S, Reyelt E. Two Teledentistry Models for the Provision of Essential Oral Health Care Services in Rural School Settings. *J Dent Hyg* 2022;96(6):43-9. [\[PubMed\]](#)
20. Estai M, Kanagasingam Y, Tennant M, Bunt S. A systematic review of the research evidence for the benefits of teledentistry. *J Telemed Telecare* 2018;24(3):147-56. [\[CrossRef\]](#) [\[PubMed\]](#)
21. Wong M, Campos-Baniak MG, Sharma V. Occipital lobe abscess following wisdom tooth extraction. *Can J Ophthalmol* 2019;54(3):e145-9. [\[CrossRef\]](#) [\[PubMed\]](#)
22. Milić T, Raidoo P, Gebauer D. Antibiotic prophylaxis in oral and maxillofacial surgery: a systematic review. *Br J Oral Maxillofac Surg* 2021;59(6):633-42. [\[CrossRef\]](#) [\[PubMed\]](#)
23. Kichloo A, Albosta M, Dettloff K, Wani F, El-Amir Z, Singh J, et al. Telemedicine, the current COVID-19 pandemic and the future: a narrative review and perspectives moving forward in the USA. *Fam Med Community Health* 2020;8(3):e000530. [\[CrossRef\]](#) [\[PubMed\]](#)
24. von Storch K, Graaf E, Wunderlich M, Rietz C, Polidori MC, Woopen C. Telemedicine-Assisted Self-Management Program for Type 2 Diabetes Patients. *Diabetes Technol Ther* 2019;21(9):514-21. [\[CrossRef\]](#) [\[PubMed\]](#)
25. Bavarian R, Pharr CA, Handa S, Shaefer J, Keith DA. The utility of telemedicine in orofacial pain: Guidelines for examination and a retrospective review at a hospital-based practice. *J Oral Rehabil* 2022;49(8):778-87. [\[CrossRef\]](#) [\[PubMed\]](#)
26. Miladinović M, Živković D, Živković M, Lazić Z, Karanović A, Mihailović Dj, et al. Follow-up dental examination a day after apicoectomy using the store-and-forward method. *Vojnosanit Pregl* 2021;78(2):154-9. [\[CrossRef\]](#)
27. Krishna M, Sybil D, Shrivastava PK, Premchandani S, Kumar H, Kumar P. An Innovative App (ExoDont) for Postoperative Care of Patients After Tooth Extraction: Prototype Development and Testing Study. *JMIR Perioper Med* 2021;4(2):e31852. [\[CrossRef\]](#) [\[PubMed\]](#)
28. Gangwani P, Mooneyham R, Feng C, Kopycka-Kedzierawski D, Kolokythas A. Accuracy of Telemedicine Consultations in Oral and Maxillofacial Surgery During the COVID-19 Pandemic. *J Oral Maxillofac Surg* 2023;81(1):65-71. [\[CrossRef\]](#) [\[PubMed\]](#)
29. Kummerow Broman K, Oyefule OO, Phillips SE, Baucom RB, Holzman MD, Sharp KW, Pierce RA, Nealon WH, Poulouse BK. Postoperative Care Using a Secure Online Patient Portal: Changing the (Inter)Face of General Surgery. *J Am Coll Surg* 2015;221(6):1057-66. [\[CrossRef\]](#) [\[PubMed\]](#)
30. Crummey A, Graham A, Besi E. Virtual consultations for oral surgery patients. *BMC Oral Health* 2022;22(1):83. [\[CrossRef\]](#) [\[PubMed\]](#)
31. Jiang S, Xiang J, Gao X, Guo K, Liu B. The comparison of telerehabilitation and face-to-face rehabilitation after total knee arthroplasty: A systematic review and meta-analysis. *J Telemed Telecare* 2018;24(4):257-62. [\[CrossRef\]](#) [\[PubMed\]](#)
32. Walker TWM, Chadha A, Rodgers W, Mills C, Ayliffe P. Electronic Follow-Up of Developing World Cleft Patients: A Digital Dream? *Telemed J E Health* 2017;23(10):847-51. [\[CrossRef\]](#) [\[PubMed\]](#)
33. Heimes D, Luhnberg P, Langguth N, Kaya S, Obst C, Kämmerer PW. Can Teledentistry Replace Conventional Clinical Follow-Up Care for Minor Dental Surgery? A Prospective Randomized Clinical Trial. *Int J Environ Res Public Health* 2022;19(6):3444. [\[CrossRef\]](#) [\[PubMed\]](#)
1. Qari AH, Alharbi RM, Alomiri SS, Alandanusi BN, Mirza LA, Al-Harthy MH. Patients' experience with teledentistry compared to conventional follow-up visits in TMD clinic: A pilot study. *J Dent* 2023;140:104774. [\[CrossRef\]](#) [\[PubMed\]](#)

Originalni rad

UDC: 616.314.8-089.87-07  
doi: 10.5633/amm.2024.0402

## TELESTOMATOLOŠKI KONTROLNI PREGLED POSLE HIRURŠKOG VAĐENJA UMNJAKA

*Kosta Todorović<sup>1,2</sup>, Milan Miladinović<sup>3</sup>, Filip Đorđević<sup>3</sup>, Danijela Staletović<sup>3</sup>, Simon Nikolić<sup>4</sup>, Marko Matvijenko<sup>5</sup>, Rastko Ivković<sup>5,6</sup>, Zdenka Stojanović<sup>7</sup>*

<sup>1</sup>Univerzitet u Nišu, Medicinski fakultet, UNO Katedra za maksilofacijalnu hirurgiju i oralnu hirurgiju, Niš, Srbija

<sup>2</sup>Klinika za dentalnu medicinu Niš, Niš, Srbija

<sup>3</sup>Univerzitet u Prištini sa privremenim sedištem u Kosovskoj Mitrovici, Medicinski fakultet, Katedra za stomatologiju, Kosovska Mitrovica, Srbija

<sup>4</sup>Univerzitet u Prištini sa privremenim sedištem u Kosovskoj Mitrovici, Medicinski fakultet, Katedra za internu medicinu, Kosovska Mitrovica, Srbija

<sup>5</sup>Univerzitet u Prištini sa privremenim sedištem u Kosovskoj Mitrovici, Medicinski fakultet, Kosovska Mitrovica, Srbija

<sup>6</sup>Stomatološka ordinacija „Jelenković“, Beograd, Srbija

<sup>7</sup>Vojnomedicinska akademija, Klinika za dentalnu medicinu, Departman za ortopediju vilica, Beograd, Srbija

Kontakt: Milan Miladinović

Ulica Anri Dinana b. b., 38220 Kosovska Mitrovica, Srbija

E-mail: milanbetter@gmail.com

Ekstrakcija umnjaka je jedna od najzastupljenijih stomatoloških hirurških intervencija. Može biti rutinska i komplikovana. Opisane su brojne varijacije u postoperativnom toku. Cilj našeg istraživanja bio je da ispita pouzdanost postoperativne kontrole hirurške ekstrakcije umnjaka metodom telestomatologije; u tu svrhu korišćeni su pametni telefoni ispitanika.

Sprovedena je eksperimentalna randomizovana studija. Kontrolni pregled urađen dan nakon operativnog zahvata, imao je dva dela: virtuelni i pregled pacijenata u ordinaciji. Digitalni kontrolni pregled obuhvatio je fotografije ispitanika i elektronski upitnik. Oralni hirurg je najpre ocenjivao digitalni kontrolni pregled, a potom je neposredno pregledao ispitanike. Rezultati su obrađeni i upoređeni korišćenjem Cohenovog kapa koeficijenta, Z-testa i McNemmarovog  $\chi^2$  testa; prag značajnosti bio je  $p = 0,05$ .

Urađeno je 40 (100%) kontrolnih pregleda. Prilikom 39 (98%) pregleda dobijeni su identični rezultati neposrednim i virtuelnim pregledom. I u jednoj i u drugoj metodi je u sedam (25%) slučajeva zapaženo da je neophodno promeniti terapiju. Broj konkretnih izmena terapije u metodi neposrednog pregleda iznosio je deset (100%), a u metodi telestomatologije devet (100%). Poređenje rezultata dobijenih prilikom kontrolnih pregleda ukazalo je na to da među njima postoji usaglašenost, čije su vrednosti bile: senzitivnost: 0,9750; specifičnost: 0,9750; efikasnost: 0,9750; Cohenov kapa koeficijent: 0,9500. Ove vrednosti ukazuju na skoro savršenu usaglašenost rezultata.

Dijagnostičke razlike između praćenja oporavka ispitanika sa hirurškom ekstrakcijom umnjaka virtuelnim putem i onog koje podrazumeva konvencionalnu metodu neposrednog pregleda nisu bile statistički značajne. Praćenje postoperativnog toka može se osloniti na moderne digitalne komunikacione tehnologije, budući da se ispostavilo da je njihova upotreba u te svrhe veoma pouzdana.

*Acta Medica Medianae 2024; 63(4):12–19.*

**Ključne reči:** telestomatologija, umnjak, kontrolni pregled, perikoronitis, otok

*"This work is licensed under a Creative Commons Attribution 4.0 International (CC BY 4.0) Licence".*