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**ПОЯВЛЕНИЕ ПОСТПЛОМБИРОВОЧНОЙ БОЛИ КАК ОСЛОЖНЕНИЕ ПРИ  
ЛЕЧЕНИИ С ИСПОЛЬЗОВАНИЕМ ПЛОМБИРОВОЧНЫХ МАТЕРИАЛОВ  
СВЕТОВОГО ОТВЕРЖДЕНИЯ**

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**THE APPEARANCE OF POSTFILLING PAIN AS COMPLICATION AFTER  
TREATMENT WITH LIGHT-CURED COMPOSITE FILLING MATERIAL**

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**Резюме.** В статье представлены оригинальные результаты исследования по исследованию проблемы появления постпломбировочной чувствительности при использовании пломбировочных материалов светового отверждения.

**Ключевые слова:** анкетирование, окклюзионное редактирование, постпломбировочная боль, прямая реставрация, фотокомпозиционный пломбировочный материал.

**Resume.** Original results of investigation about the problem of appearance of postfilling pain as complication after treatment with light-cured composite filling material are presented in the article.

**Keywords:** direct restoration, light-cured composite materials, occlusal redaction, postfilling pain, questionnaire.

**Introduction.** Postfilling pain is the common problem among dentists nowadays, despite the fact that light-cured composite materials are improved, qualification of procedures by doctors increases and methods of dental treatment are developed. The postfilling pain is still one of the main complication after direct restoration [1, 2, 3].

**Aim of the study:** to analyze the knowledge and opinions of dentists regarding causes of postfilling pain and methods of its prevention after working with light-cured composite material.

**The task of the study:**

1. Analysis of survey among dentists about the main reasons of appearing of postfilling pain, prevention methods and elimination of postfilling pain, the level of influence of different factors on the appearance of postfilling pain.

2. Analysis of appearing of postfilling pain among patients after treatment with light-cured composite filling material

**Materials and methods.** The first part of the research was to conduct a survey of dentists about postfilling pain problem. Data was collected from 65 dentists' reports of "Republican dental clinic" and "13<sup>th</sup> city dental clinic" who took part in the survey, in average, with 11.3 years specialized working experience. Special questionnaire was used for research, which consists of 12 questions (figure 1).

|                                                                                                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Have you ever had the case of appearance of postfilling pain after treatment with light-cured filling composite material in your practice? |
| 2. What do you think about the main reason of appearance of postfilling pain?                                                                 |
| 3. How does postfilling pain occur?                                                                                                           |
| 4. What methods do you use for reduction of postfilling pain?                                                                                 |
| 5. Do you use isolating liner with light-cured filling composite material during treatment of middle caries?                                  |
| 6. Do you use a stopwatch during etching of carious cavity?                                                                                   |
| 7. Do you know the density of the luminous flux of your dental curing light lamp?                                                             |
| 8. What dental curing light lamp do you use in your practical work?                                                                           |
| 9. How often do you measure the density of the luminous flux of dental curing light lamp?                                                     |
| 10. Do you use air-water cooling during preparation of tooth hard tissues?                                                                    |
| 11. Do you use regular air-water cooling during grinding, finishing and polishing of restoration?                                             |
| 12. What generation of adhesive system do you use in your daily work?                                                                         |

Fig. 1 – The example of questionnaire for survey

The survey was conducted individually. Obtained results processed by methods of descriptive statistics. Data processing was carried out using a computer program KonSi-Simple Anketter.

The second part of the research was to carry out clinical research. Object of study is complications after treatment of middle caries with light-cured composite materials. 5 dental therapists took part in the research, 24-55 aged. The study was conducted during 6 months with 780 restored teeth. In 61 cases (7,82%) complications about postfilling pain were noted. The analysis of cases did not reveal the dependence on the quality of a particular doctor's job. Percentage of complications is distributed evenly among doctors.

Monitoring of patients was carried out in the dynamics after 1 week, 2 weeks and 1 month (figure 2).

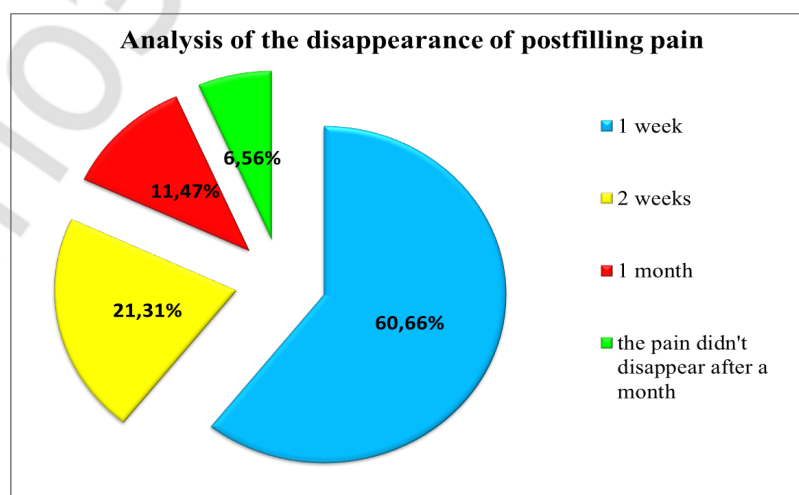
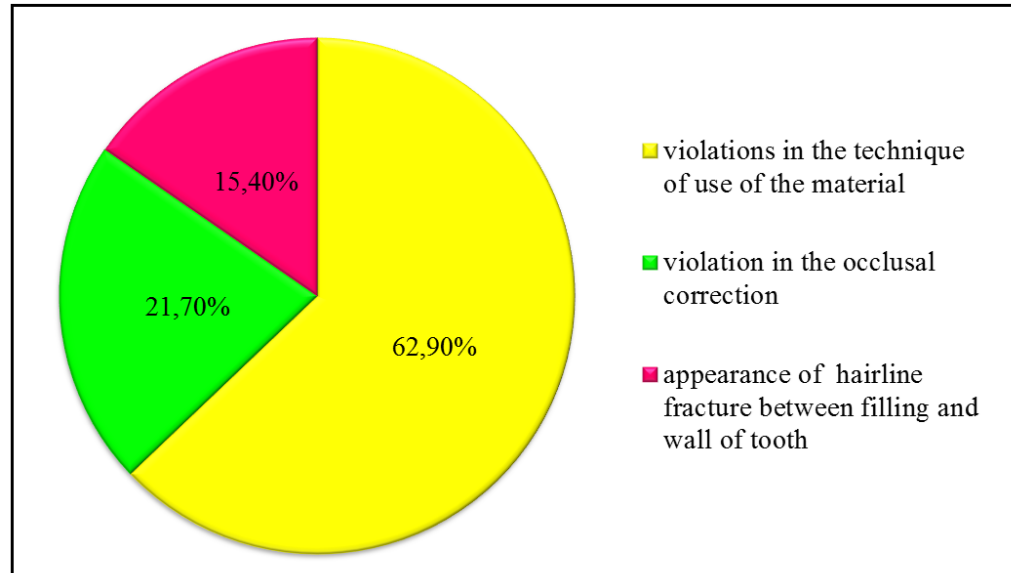


Fig. 2 – Analysis of the disappearance of postfilling pain

Most of the patients had disappearing of postfilling pain within one week after restoration. In 6,56 % from total number of complication the (0,51 % from total number of restored teeth) patients had complaints about insignificant postfilling pain, the complaints disappeared after replacing the restoration .

Data of dentists' survey, in clinical investigation, was conducted to identify the causes of postfilling pain after treatment (figure 3).



**Fig. 3** – Analysis of the causes of postfilling pain appearance according to opinions of dentists

**Results.** Successful clinical results in tooth restoration with light-cured composite filling material required strong following of rules in work with adhesive system and restorative material, mandatory compliance with a certain sequence of actions (algorithm), professional occlusal redaction of teeth, that are the guarantee in prevention of appearance of postfilling pain among patients.

**Conclusions:**

According to the results of an anonymous survey, the most part of dentists:

- 1 Considers, that overdrying dentin is the most common cause of appearing of post-filling pain;
- 2 Considers, that overdrying dentin is the most common cause of appearing of post-filling pain;
- 3 Had the case of appearance of postfilling pain after treatment with light-cured filling composite material in their practice;
- 4 Fights with postfilling pain by application of fluoride-containing dental materials;
- 5 Sometimes uses isolating liner with light-cured filling composite material during treatment of middle caries;
- 6 Doesn't use a stopwatch during etching of carious cavity;
- 7 Doesn't know what dental curing light lamp they use in practical work, and doesn't measure the density of the luminous flux of the lamp;
- 8 Always use air-water cooling during preparation of tooth hard tissues and doesn't use regular air-water cooling during grinding, finishing and polishing of restoration;
- 9 Uses generation V of adhesive system.

According to the results of clinical investigation determined:

1 In 7,82% cases complaints of patients about appearance of postfilling pain were reported;

2 In 7,82% cases complaints of patients about appearance of postfilling pain were reported;

3 In 6,56 % from total number of complication cases (0,51 % from total number of restored teeth) patients had complaints about insignificant postfilling pain, the complaints disappeared after replacing the restoration.

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