



## RESULTS

Table 1. Classification of patients according to dwelling place

		Place of living		
		gender	country	city
Study group	women		3	23
	men		0	5
	total		3	28
Control group	women		3	23
	men		0	5
	total		3	28

The results of the study are presented in Tables 1 – 6. The clinical group included 26 women and only 5 men. Twenty-eight people came from the city and 3 came from the country (Table 1). Age distribution was 15 to 34 years. Patients aged between 20 and 24 years were the most numerous: 14 people (45.16%) (Table 2).

Table 2. Classification of patients according to age and sex

		Age in years				Total	%
		15–19	20–24	25–29	30–34		
Study group	F	9	11	3	3	26	83.87
	M	1	3	1	0	5	16.13
	Total	10	14	4	3	31	100
Control group	F	9	11	3	3	26	83.87
	M	1	3	1	0	5	16.13
	Total	10	14	4	3	31	100

Patients were divided according to the present occupation into school children (32.26%), students (51.61%), including dentistry students (29.03% of the studied population), and those with a job (16.13%) – Table 3.

Table 3. Classification of patients according to the present occupation

Study group				Control group			
School kid	student		working person	school kid	student		working person
	dentistry	other			dentistry	other	
10	9	7	5	10	9	6	6
32.26%	29.03%	22.585	16.13%	32.26%	29.03%	19.35%	19.35%

Twenty-two patients (70.97%) were aware of having had teeth sealed, although most of them could not remember the name of the sealant (Table 4). A few individuals mentioned the Helioseal preparation. The procedure was performed in the primary school, at our Department of Developmental Age Dentistry or at a private surgery. In most cases teeth had been sealed during primary school years or directly after. However, patients could not give the exact date when the procedure had been performed.

Table 4. Awareness of having teeth sealed in the selected group

	Number of patients	%
Yes	22	70.97
No	9	29.03

People from the control group answered the question concerning the procedure of fissure sealing and its purpose. 38.7% of patients had adequate knowledge but three thirds of them were dentistry students. The remaining 61.3% of the surveyed did not know the answer to the question.

Table 5. Numbers and kinds of sealed teeth

	First molars	Second molars	Third molars	First premolars	Second premolars	Foramina caeca
Upper teeth	16	23	12	26	14	2
Lower teeth	9	21	3	20	21	0
Total	25	44	15	46	35	2
Total %	14.97	26.34	8.98	27.54	20.95	1.19
Number of all sealed teeth	167					

Table 5 presents the numbers and kinds of sealed teeth in the studied group. One hundred and sixty-seven teeth were found to have been fissure sealed. In most cases the sealing concerned the chewing surfaces of molars and premolars. Only in two cases a sealant was discovered in the foramina caeca of upper lateral incisors. Sealing was performed in first, second and third molars and first and second premolars of the maxilla and mandible. Sealants were discovered more often on the occlusal surfaces of upper teeth, compared to lower teeth, with the exception of upper second premolars. Analysing maxillary and mandibular teeth together, the presence of a sealant was most often noted in the second molars (26.35%) and in the first premolars (27.54%). In one case the medical record revealed invasive sealing in teeth 18 and 28 because of suspected caries. Tetric Flow was used for the purpose. Third molars constituted 8.98% of all sealed teeth.

Table 6. Mean DMF indices and the values of D, M and F in the studied population

	Study group					Control group				
	number of subjects	D	M	F	mean DMF index	number of subjects	D	M	F	mean DMF index
Number	31	25	2	151	5.74	31	119	19	226	11.74
Average per person		0.81	0.06	4.87			3.83	0.61	7.29	

The severity of caries in both groups is presented in Table 6. The mean DMF index for people with sealed teeth was 5.74. and 11.74 for the controls. The particular numbers equalled respectively: D – 0.81 and 3.83, M – 0.06 and 0.61, F – 4.87 and 7.29.

## DISCUSSION

Chewing surfaces of teeth are protected by means of fissure sealants directly after the tooth has erupted. This method of caries prevention is usually discovered in primary school children. Yet there is a number of older individuals who have had their teeth sealed. In our material those were secondary school pupils, students and people with jobs. The number of patients with sealants decreased with age. In the age group of 30- to 34- year-olds there were only three patients (9.67%) with third molars sealed.

Almost 30% of the clinical group were dentistry students who revealed extensive knowledge of caries prevention and were adequately motivated to use this knowledge properly. About 71% of the study group were aware of having had their teeth sealed and 29% did not remember anything about it. This points to a poor educational effect of a dental surgeon who did the sealing and the patient's inadequate health education.

Invasive sealing was revealed in one case. Some researchers maintain that drilling grooves delicately with a diamond bur ensures better filling with the sealant (8, 9), although others do not share this opinion (13). Proceeding like this is indicated for small carious lesions in dental fissures.

A comparison of mean DMF indices in the clinical and control groups showed that the DMF index was twice lower for patients who had had their teeth sealed by way of prevention (5.74, compared to 11.74 in the control group). A mean number of teeth with cavities was four times lower in the study group than in the controls. This indicates a positive effect of fissure sealing which prevents and reduces caries in the sealed teeth (5, 13).

Fissure sealing is one of the methods that make it possible to achieve the goal of caries reduction. Delaying the application of the first filling allows for a better confidence that a patient has in his dentist, thanks to painless proceeding which is of no little importance also in an adult patient. A comparison of the cost of fissure sealing in one tooth and filling a tooth with a flexible material indicates that fissure prophylaxis is a better choice (90:150) (4). However, this form of caries prevention is counted among the "technically demanding" (special equipment, personnel trained in prevention) and should be chosen for patients with a high risk of dental decay (10, 14).

## CONCLUSIONS

To sum up one needs to stress that: 1. 29% of the clinical group did not know that they had had their teeth sealed, which indicates poor health education. 2. The remaining 71% of patients did know that they had sealants on the chewing surfaces of their teeth, which resulted from the fact that they studied dentistry or from appropriate dealing on the part of the dental practitioner. 3. In patients over 20 years of age the chewing surfaces of third molars were sealed, as those teeth are prone to caries due to their anatomical structure (fissures and pits). 4. The application of the discussed preventive method gave measurable effects in the form of a twice lower DMF index in the clinical group, compared to the control group.

Every method of dental decay prevention requires the patients' cooperation, their personal involvement, which is the more probable, the older the patient. It is then easier to replace the initial enthusiasm for the applied method with a thorough knowledge and individual responsibility for one's own health.

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#### SUMMARY

The purpose of our study was to find if patients treated by students in the Department of Conservative Dentistry of the Medical University of Lublin, Poland, had had their teeth sealed. It was found that 31 people aged 15 to 34 years had 167 teeth sealed. The occlusal surfaces of first, second and third molars, first and second premolars in the maxilla and mandible, and foramina caeca of upper lateral incisors were sealed. 71% of the examined patients were aware that the sealing procedure had been carried out, but 29% were not. The DMF index in the examined group was twice lower than in the control group (5.74: 11.74).

#### Badania obecności laków szczelinowych u pacjentów leczonych przez studentów w Katedrze Stomatologii Zachowawczej AM w Lublinie

Celem pracy było stwierdzenie czy pacjenci przyjmowani przez studentów w Katedrze Stomatologii Zachowawczej AM w Lublinie mają lakowane powierzchnie żujące zębów. U 31 osób w wieku od 15 do 34 lat zaobserwowano 167 zębów z lakiem szczelinowym. Lakowane były powierzchnie żujące I, II, III trzonowców oraz I, II przedtrzonowców szczęki i żuchwy, a także otwory ślepe górnych bocznych siekaczy. Około 71% badanej grupy wiedziało, że zastosowano u nich uszczelnienie bruzd i zagłębień anatomicznych, zaś 29% nie było tego świadome. Wartość średniej liczby PUW w grupie badanej była dwukrotnie mniejsza niż w grupie kontrolnej (5,74 w stosunku do 11,47).