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*The selected aspects of injuries of the organ of vision among persons  
in productive age*

The most frequent reasons which determine patients to visit an outpatient clinic are injuries of the organ of vision. Among all the organ of sight injuries the most particular ones are those which cause the impairment of sight or monocular vision (1, 2, 8, 9). We found out that the particular place in the injuries of organ of sight takes foreign bodies, especially the metallic ones (1, 2, 3, 4, 5, 6, 7, 8, 9). We found it interesting that a huge amount of injuries of the organ of vision occur among the young and professionally active people.

The aim of our research was to analyze the selected, epidemiological aspects of traumas of organs of sight among 18–65-year-old patients who were examined during the emergency service in the Department of Ophthalmology in Lublin between January and September 2005.

#### MATERIAL AND METHODS

We examined 160 patients with the injuries of the organ of vision. The direct type of examination was an inquiry which contained the following social-demographic data: sex, age, education, current professional status, permanent residence, the estimate time that passed from the moment of injury to the visit to an outpatients' clinic, the circumstances of the trauma. On the ground of the ophthalmological examination we evaluated the type of injury, the potent necessity of admission to hospital and an introduced treatment.

#### RESULTS

We found out that in our research group there were much more men with injuries of the organ of vision than women (143 men with injuries of the organ of sight – 89.38%), 17 women (10.63%) (Fig. 1).

It was also observed that the largest age group was among the patients who were 18–35 years old (79 patients), which makes 49.38%; fewer patients were between 36–50 years old (55 patients) which makes 34.38%; The smallest group of patients was among those between 50–65 years old (26 patients) which makes 16.25%. The inhabitants of villages constituted the total of 57% of the examined population (92 patients), the inhabitants of the city 68 (42.5%) patients. The level of education of our

examined group presents as follows: 109 (68.13%) patients with elementary education; 36 (22.5%) patients with secondary school degree; 15 (9.38%) patients with university education (Fig. 2).

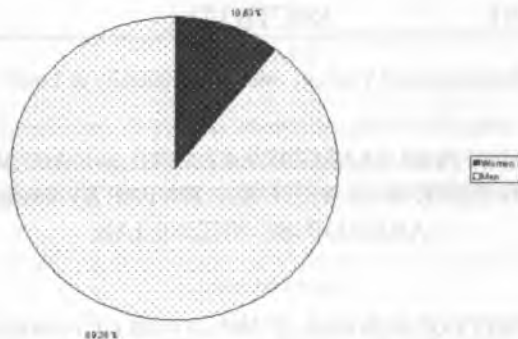


Fig. 1. The sex and the injuries of the organ of Visio



Fig. 2. The education in the study group

The present professional status of each patient was established using the history data. We noticed that there were 121 (75.63%) active working patients and 39 (24.38%) unemployed patients. Using the anamnesis we were able to estimate how much time has passed from the moment of injury of the organ of sight to the visit to the ophthalmological admission room of each examined patient. If we analyze Figure 3 we can draw a conclusion that the patients who visited the ophthalmological admission room on the first day after the injury, is the largest group of our examined population – 64 patients, which makes up the total of 40% of the group. We also observed that: 59 (36.88%) patients came to the ophthalmological admission room on the day of injury; 32 (20.0%) patients came 2–3 days after the injury had happened; 5 (3.13%) – after four days (Fig. 3).

We examined the medical history of patients to ascertain the place and the circumstances of the trauma of the organ of vision. 47 (29.38%) patients suffered from these injuries during the working hours in the place of their work employment; 45 (28.13%) patients in their spare time, at home; 39 (24.38%) patients on their own farm; 28 (17.5%) patients did not say where the injury took place. The circumstances of the trauma are divided into four groups: 1) 92 (57.5%) patients were using some machines and tools when the trauma happened, 2) 5 (3.13%) patients were working with chemical substances, 3) 18 (11.25%) patients were practising sports and other activities, 4) 37 (23.13%) patients received the injury in other circumstances.

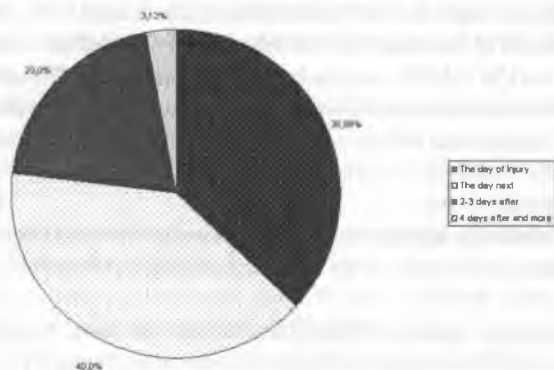


Fig. 3. The time of visiting the Ophthalmological Admission Room

Six (3.75%) patients did not say what was the cause of the trauma (Fig. 4). On the grounds of ophthalmological examinations we diagnosed the type of injury of the organ of sight (Fig. 5).

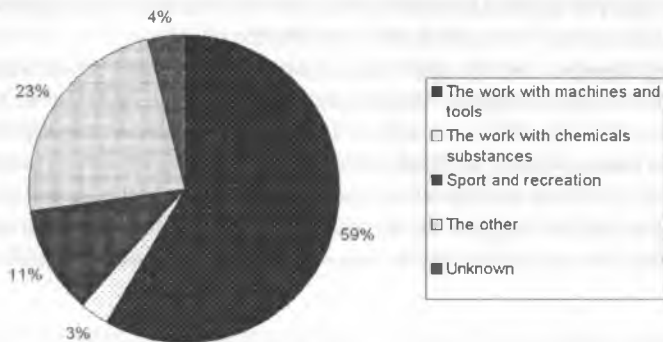


Fig. 4. The circumstances of the injury

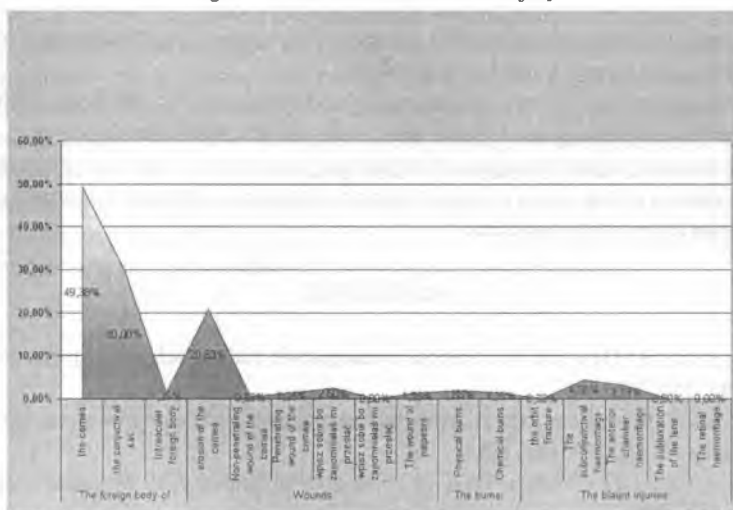


Fig. 5. The type of injury

We also found that the right eye was prone to the injury in most – 91 (56.88%) patients; 75 (46.88%) suffered because of the trauma of the left eye. We decided to treat 10 (6.0%) patients in the ward and the rest 150 (94.0%) patients in the outpatient clinic. The most common way of treatment of these injuries was pharmacological treatment using the drugs with local activity – 146 (91.25%) patients and instrumental therapy – 111 (69.38%) patients; pharmacological oral treatment – 3 (1.88%) patients.

In summary, we found out that:

1) there appear statistically significant correlations between the most frequent type of injury (a foreign body in the cornea) and the sex of the examined study group. Pearson's  $\chi^2 = 10.7640$ ,  $df=1$ ,  $p=0.001035$ ;

2) there is a statistically significant coincidence between the most frequent type of injury of organs of vision (a foreign body in the cornea) and the education: Pearson's  $\chi^2 = 5.93815$ ,  $df=1$ ,  $p=0.014818$ ;

3) there is a statistically significant correlation between the most frequent type of trauma of the organ of sight (a foreign body in the cornea) and the professional status (employed and unemployed): Pearson's  $\chi^2 = 5.30916$ ,  $df=1$ ,  $p=0.021216$ ;

4) there is a statistically significant coincidence between the most frequent type of the organ of vision (a foreign body in the cornea) and the time of the visit to the ophthalmological admission room by the patient: Pearson's  $\chi^2 = 12.9039$ ,  $df=3$ ,  $p=0.004851$ .

The statistical analysis did not confirm any significant correlations between the most frequent type of injury of the organ of sight (a foreign body in the cornea) and the following features: a) the age of the examined patients; Pearson's  $\chi^2 = 1.41922$ ,  $df=1$ ,  $p=0.233535$ ; b) the place of residence of the examined patients (a city, a village); Pearson's  $\chi^2 = 1.30769$ ,  $df=1$ ,  $p=0.252817$ . There is no statistically significant coincidence between the time that passed from the moment when the injury of the organ of sight took place and the moment when the patient visited the ophthalmological admission room and the place of his/her residence (a city, a village); Pearson's  $\chi^2 = 2.20377$ ,  $df=3$ ,  $p=0.531209$ .

## CONCLUSIONS

1. The most frequent group with the injury of the organs of sight consisted of men who worked professionally using machines and tools.
2. The most common trauma of the organ of vision was a foreign body in the cornea.
3. The injury of the organ of vision was observed mainly in the right eye.
4. Most patients with the organs of sight injury were treated in the outpatients' clinic.
5. The injuries of the organ of vision among people in productive age make a really big problem in the outpatients' practice.

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### SUMMARY

The injuries of the organ of vision are one of the main reasons which determine patients to a visit to the ophthalmological emergency service. The aim of this study was an examination of selected epidemiological aspects of injuries of the organ of sight among working class (18–65 years). We examined 160 patients who visited the ophthalmological emergency service at the Department of Ophthalmology of the Medical University of Lublin between January and September 2005. We found out that: 1. in our study group there were much more male patients with injuries of the organ of vision; 2. the most common injury of the organ of sight was the foreign body of cornea; 3. the injury of the organ of vision was observed mainly in the right eye; 4. most patients with the injuries of the organ of vision were treated in the outpatients' clinic; 5. there was a statistically significant correlation between the most frequent type of injuries of the organ of vision (the foreign body of cornea) and the sex, education, professional status, and the time of visiting an outpatients' clinic.

### Wybrane aspekty urazów narządu wzroku u osób w wieku produkcyjnym

Urazy narządu wzroku są jedną z głównych przyczyn zgłaszania się pacjentów na ostry dyżur do okulisty. Celem pracy była analiza wybranych aspektów epidemiologicznych urazów narządu wzroku w populacji osób w wieku produkcyjnym (18–65 rok życia). Przebadano 160 pacjentów zgłaszających się do Kliniki Okulistyki Akademii Medycznej w Lublinie na ostry dyżur w okresie od stycznia do września 2005 r. 1. Urazom narządu wzroku ulegali głównie mężczyźni. 2. Najczęstszym urazem narządu wzroku było ciało obce rogówki. 3. Najczęściej uraz dotyczył oka prawego. 4. Większość pacjentów była leczona ambulatoryjnie. 5. Stwierdzono korelację statystyczną między najczęściej występującym urazem narządu wzroku (ciało obce rogówki) a płcią, wykształceniem, statusem zawodowym, czasem zgłoszenia do izby przyjęć od momentu urazu.