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Experiences of Hospital Emergency Department of Clinical Hospital (SPSK-1) in Lublin

Growing health hazard connected with civilization progress, increase of traffic accidents number, circulatory system diseases and disasters imply the organization of health care system to improve the patients' safety (6, 9, 4). Taking into account the fact of Poland access to international agreements which guarantee, among others, citizens' safety in case of health and life hazard, acceleration of work leading to complete emergency system organization is very crucial. Project of Integrated Emergency System accepted to realization in Poland establishes hospital emergency departments (SOR) to be the most important element of the system. Basing on the principles, since 2000 hospital emergency departments have been organized, and one of them is Hospital Emergency Department in SPSK-1 in Lublin opened on 19 September 2000. The decision was made after the resolution of Lublin Medical Academy Senate about establishing the Clinic of Trauma Surgery and Emergency Medicine with clinical support of Emergency Department of SPSK-1 in Lublin. Experiences of hospital emergency departments confirm their great usefulness in the system of health care as they not only improve effectiveness and treatment results of patients in case of emergency life hazard but often replace and complement basic health care treatment.

MATERIAL AND METHODS

Emergency Department of SPSK-1 is at present one of four existing in Lublin emergency departments treating patients of over 14 years old. Younger patients are treated in Emergency Department of Children Clinical Hospital. Emergency Department of SPSK-1, having 48-hour standby duty, takes medical care of the population about 450,000 inhabitants of Lublin and the region. Patients out of the Lublin region are treated in the department if they come there within 24 hours after emergency health or life hazard happened. In the paper medical documentations of 54,020 patients treated in Emergency Department from 1 I 2001 to 31 XII 2004 are analyzed. Results of the studies are presented in tables and the most important data and relationships are discussed. Basic statistical methods were used to analyze data. The studies do not include patients admitted to hospital according to the schedule.

RESULTS

Analysis of results is shown in Table 1. The majority of patients treated in Emergency Department consists of patients with less serious diseases without a need of hospitalization (67.9% of all patients). A slight increase of the number of patients was caused by an increasing number of patients consulted in the ambulatory. The tendency is clearly seen in the years 2003 and 2004, where the percent of

patients consulted in the ambulatory (70.1% and 69.8%) is significantly different $p<0.001$ from this group of patients in the years 2001 and 2002 (65.6% and 65.3%).The number of patients needing hospitalisation in the analysed period was at the similar level from 11 to 13 patients per 48 hrs (standard deviation 0.957427).

Table 1. Number of hospitalized and non-hospitalized patients treated in Emergency Department from 1 I 2001 to 31 XII 2004

Year	2001 n. (average per 24hrs), (% of 12045)	2002 n. (average per 24hrs), (% of 12775)	2003 n. (average per 24hrs), (% of 13870)	2004 n. (average per 24hrs), (% of 15330	Total n. (average per 24hrs) (% of 54020)
Hospitalized patients	4141 (11) (34.4%)	4422 (12) (34.7%)	4138 (11) (29.9%)	4630 (13) (30.2%)	17340 (11.9) (32.1%)
Non- -hospitalized patients	7904 (22) (65.6%)	8353 (23) (65.3%)	9732 (27) (70.1%)	10700 (29) (69.8%)	36680 (25.1) (67.9%)
Total	12045 (33)	12775 (35)	13870 (38)	15330 (42)	54020 (37) (100%)

Table 2. Profile of diseases entity of treated patients

Medical discipline	Consultation ambulatory patients n. (% of 36680)	Hospitalisation after ED treatment n. (% of 17340)	Total n. (% of 54020)
Trauma Surgery	14782 (40.3%)	4265 (24.6%)	19047 (35.3%)
Internal Medicine	12031 (32.8%)	6433 (37.1%)	18464 (33.8%)
General Surgery and Vascular Surgery	8693 (23.7%)	4820 (27.8%)	13513 (25.0%)
Another departments	1174 (3.2%)	1076 (6.2%)	2250 (4.1%)
Intensive Care Unit	0 (0.0%)	746 (4.3%)	746 (1.8 %)
Total	36680 (100%)	17340 (100%)	54020 (100%)
% of 54020	67.9%	32.1%	100%

Analysis of Tab.2 results shows that the highest percent of patients treated in Hospital Emergency Department are the patients with various traumas (35.3% of all patients), who generally need ambulatory consultation (40.3% of all ambulatory consulted patients, 77.6% of „trauma" patients). The second numerous group consists of patients with various internal diseases (33.8% of all patients); however, in the group the percent of patients consulted in the ambulatory was lower (65.1% of internal diseases patients).

Table 3. Admittance procedure to Hospital Emergency Department

Admittance procedure to Hospital Emergency Department	Referral from emergency ambulance service	Referral from other doctor	Without referral	Total
Number of patients	26.038	13.559	14.423	54.020
%	48.2%	25.1%	26.7%	100%

The results of Table 3. show that nearly half of the patients are taken to Hospital Emergency Department by ambulance, more than Ł (26.7%) come directly without any previous contact with a doctor, Ł of patients (25.1%) are directed by doctors – specialists from other medical health care centres.

DISCUSSION

The fundamental tasks of Hospital Emergency Department resulting from law legislations (9, 6) and Health Ministry Order dealing with hospital emergency department (7) are as follows: a) to provide health service such as preliminary diagnostics and treatment in the range necessary to stabilize life function of patients with life and health hazard resulting from external or internal causes, especially in case of adults and children accident, trauma and poisoning; b) to provide health service, in the range defined in point 1, for patients injured in emergency and disasters states; c) patient medical protection and in case of further specialist treatment necessity, organization of transport to other medical care centres. However, as it results from our observations, most of the patients treated in Emergency Departments could be treated in public health centres or others, because Emergency Departments equipment and their staff qualifications often exceed the patients needs. The studies show the number of patients with less serious diseases increase in 2003 and 2004 (Tab. 1) was caused by disturbances of the night and ambulatory activity of public health centres and closing of emergency ambulatories. That is why more patients had to be treated in emergency departments (Tab. 3). Such a situation makes the functioning of Emergency Department difficult and in some situations may also cause lower quality of services for patients in emergency cases. Overcrowded emergency departments are observed not only in Poland, but also in other countries where emergency medicine has existed for many years (2, 3, 8). The solution of the problem seems to be the financial incentives and strict law regulations to limit the uncontrolled inflow of patients with not serious diseases to hospital emergency departments. According to international experience and the requirements of the Order (1, 5, 7), all Hospital Emergency Departments must be prepared to treat patients with emergency hazard of health and life regardless of their aetiology. In most emergency departments in Poland it is not possible to realize due to the fact that the profile of diseases of patients treated in Hospital Emergency Department depends mainly on the hospital profile. It is clearly seen in big cities, where a lot of hospitals of different specialization profile exist. The example may be the city of Lublin, where children under 14 are treated in the separate hospital and it is not necessary to organize emergency care for children in other hospitals. A similar situation exists with patients needing hospitalisation in toxicology department, which is in the hospital where emergency department does not exist. Organization of emergency departments in other hospitals for treatment of patients with poisoning of various kinds is not necessary as emergency ambulance doctor decides to take the patient to hospital were there is a toxicology department. Another example may be University Hospital no. 1 in Lublin (SPSK-1) in Lublin, where Neurology Department does not exist and that is why the number of patients with neurological diseases in Emergency Department is very small (Tab. 2) and after preliminary diagnosis they are usually transported to other hospitals.

CONCLUSIONS

1. Hospital Emergency Department must deal with patients in cases of emergency but it must be noticed that about 2/3 of the department patients show lower health hazard and some of them could be treated in out -hospital practice.

2. Only ~ of Hospital Emergency Departments patients are transported by ambulances, the others come without a referral or referred by doctors from out-hospital practice.

3. The profile of diseases of patients treated in Emergency Departments depends on the profile of the hospital specialistic departments and, especially in big cities, implies organization of various kind of emergency departments.

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SUMMARY

Project of Integrated Emergency System accepted to realization in Poland whose principles are included in Act about State Medical Emergency from 25 July 2001, establishes Emergency Departments (SOR) to be the most important element of the system. Based on the project, since 2000 emergency departments have been organized in Poland, and among others Emergency Department in SPSK-1 in Lublin opened on 19 September 2000. The decision was made after the resolution of Lublin Medical Academy Senate about establishing of Clinic of Trauma Surgery and Emergency Medicine with clinical support of Emergency Department of Academic Hospital no 1 in Lublin (SPSK-1). Four years' experiences of hospital emergency departments confirm their great usefulness in the system of health care as they not only improve effectiveness and treatment results of patients in case of life hazard emergency but often replace and complement basic health care activity. In the work the medical documentations of 54,020 patients treated in Hospital Emergency Department from 1 I 2001 to 31 XII 2004 were analyzed. The observed slight tendency of growth in the number of treated patients was mainly caused by an increasing number of patients treated in ambulatories. It is clearly seen in 2003 and 2004, where the percent of ambulatory consulted patients (70.1% and 69.8%, respectively) is crucially different, $p < 0.001$, from the number of patients the group treated in 2001 and 2002 (65.6% and 65.3%, respectively). The number of patients needing to be hospitalized was at the same level during the analyzed period of time and equaled from 11 to 13 patients per 24 hours. Assessment of disease profiles of patients treated in Emergency Department has shown the highest percentage of

patients with different kinds of traumas (35.3% of all patients) who mainly need ambulatory consultation (77.6% of trauma-patients). The second numerous group consists of patients with various internal diseases (33.8% of all patients); however, the percent of ambulatory consulted patients in the group was lower (65.1% of internal diseases-patients). Analysis of the presented results leads to the following conclusions: Emergency Department has to be directed at life rescue but it must be notified that about 2/3 of patients treated in the department are the patients with lower health hazard. The profile of the diseases of patients treated in Emergency Department depends on the profile of the hospital specialist departments.

Doświadczenia Oddziału Ratunkowego Szpitala Klinicznego Nr 1 w Lublinie

Przyjęty w Polsce do realizacji projekt systemu ratownictwa, którego zasady zostały zawarte w zapisach Ustawy o Państwowym ratownictwie medycznym z 25 lipca 2001 r., zakłada, że jednym z zasadniczych ogniw tego systemu są szpitalne oddziały ratunkowe (SOR). Na bazie tych założeń od r. 2000 w Polsce zaczęły powstawać szpitalne oddziały ratunkowe, a jednym z pierwszych, otwartym 19 września 2000 r., był SOR w Samodzielnym Publicznym Szpitalu Klinicznym nr 1 w Lublinie. Otwarcie poprzedzone było uchwałą Senatu lubelskiej Akademii Medycznej o utworzeniu Kliniki Chirurgii Urazowej i Medycyny Ratunkowej, której zapleczem Klinicznym stał się SOR SPSK-1 w Lublinie. Doświadczenia z funkcjonowania szpitalnych oddziałów ratunkowych potwierdzają ich ogromną przydatność w systemie opieki zdrowotnej, gdyż ich działalność nie tylko poprawia skuteczność i wyniki leczenia pacjentów w stanach nagłego zagrożenia życia, ale również niejednokrotnie zastępuje lub uzupełnia działalność podstawowej opieki zdrowotnej. W pracy analizowano dokumentację medyczną 54020 pacjentów leczonych w SOR w okresie od 1 I 2001 do 31 XII 2004 r. Stwierdzono niewielką tendencję wzrostową liczby leczonych pacjentów w poszczególnych latach, jednakże wzrost ten spowodowany był głównie rosnącą liczbą pacjentów leczonych w trybie ambulatoryjnym. Tendencja ta zaznaczyła się wyraźnie w latach 2003 i 2004, kiedy odsetek pacjentów leczonych ambulatoryjnie (70,1% i 69,8%) różnił się istotnie $p< 0,001$ od liczby pacjentów tej grupy leczonych w latach 2001 i 2002 (65,6% i 65,3%). Liczba pacjentów wymagających hospitalizacji w analizowanym okresie kształtowała się na podobnym poziomie od 11 do 13 pacjentów na dobę. Ocena profilu jednostek chorobowych pacjentów leczonych w SOR wykazała, że największy odsetek stanowili pacjenci z różnego rodzaju urazami (35,3% wszystkich pacjentów) i byli to głównie pacjenci wymagający leczenia w trybie ambulatoryjnym (77,6% chorych „urazowych"). Druga pod względem liczebności to grupa chorych z szerokim wachlarzem schorzeń internistycznych (33,8% wszystkich pacjentów), jednakże w tej grupie chorych stwierdzono mniejszy odsetek pacjentów leczonych w trybie ambulatoryjnym (65,1% chorych „internistycznych"). Analiza wyników prezentowanych w opracowaniu pozwala na wyciągnięcie następujących wniosków: SOR musi być ukierunkowany na działania ratujące życie osób najciężej poszkodowanych, należy jednak pamiętać że ok. 2/3 chorych wymagających leczenia w tym oddziale stanowią osoby z mniej ciężkim zagrożeniem zdrowia. Profil jednostek chorobowych pacjentów leczonych w SOR zależy od profilu specjalistycznych oddziałów tego szpitala.