Clinical Study

Emergency Room Admission of On-Duty Police at a Swiss University Hospital

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Background. Police and law enforcement officers may face physical violence and multiple occupational hazards in the line of duty. There is no nationwide statistical reporting of police officers' injuries in Switzerland. The aim of this study was to describe the epidemiological features of emergency room admissions of on-duty police officers. **Methods.** The retrospective analysis was based on the prospective database of the Emergency Department of Bern University Hospital. Fifty-seven (57) police officers presenting to our department were included and analysed. **Results.** Minor blunt trauma (32/57) associated with extremity trauma was the leading cause of admission to our emergency department. 16 body fluid born exposures with a possible risk of viral transmission were reported, with 12/16 cases during summer; serological testing for HBV, HCV, and HIV was negative in all cases. No police death was reported. **Conclusions.** Police officers are exposed to occupational hazards. In comparison to other countries the number of severely injured or killed officers is very low. In the light of the daily reports in the lay media about assaulted police officers, it may be assumed that the majority of injured police officers were treated by general practitioners outside the hospital or treated by themselves. An adequate injury prevention strategy is desirable, combined with more meticulous nationwide reporting of police officers' injuries.

1. Introduction

Police and law enforcement officers and other public safety personnel (e.g., emergency medical service workers, firefighters, etc.) may face several physical, mental, and emotional stressors in the line of duty and are particularly at risk of being injured or of injuring others [1]. Reports on such injuries come mainly from outside Switzerland, like the USA and the UK [1]. Even though physical health and psychological resilience are required to become a police officer in Switzerland, they are continuously in the media spotlight and are often the scapegoats for a variety of social problems. As a consequence, negative psychological states (e.g., burnout, depression, anxiety) are common among police officers worldwide [2–5]. Though violence against police officers is omnipresent in the daily Swiss lay media, the public is scarcely aware of the hazards of police officers' daily work,

not to mention the critical incident stressors, such as assaults, long and irregular work hours, and exposure to infectious or hazardous material while on duty [6–8]. The exposure of police officers to potential health risks and even the risk to their physical integrity is well understood within the Swiss law enforcement community but has been less studied than with other groups, such as healthcare professionals or military veterans. Publications reporting on incidence and severity are scarce [9, 10]. In Switzerland, there is no nationwide statistical reporting on the incidence, severity, and outcomes of police officers' injuries and no published data until today.

The aim of the present study was therefore to describe the epidemiological features of emergency room admissions of on-duty police officers at the University Hospital Bern, Switzerland. To our best knowledge this is the first publication of its kind in Switzerland.

TABLE 1: Police officers' ($n = 57$) injury patterns.

Type of injury	Admitted	Outpatient
Blunt ($n = 31$)	7	24
Upper extremity, no.	14	2
Head-maxillofacial, no.	12	3
Lower extremity, no.	3	1
Chest, no.	2	1
Penetrating ($n = 5$)	1	4
Needlestick, no.	3	0
Gunshot wound, no.	1	1
Stab wound, no.	1	0
Others ($n = 21$)	1	20
Human bite, no.	7	1
Contact with blood/saliva, no.	6	0
Dog bite, no.	3	0
Human scratch, no.	2	0
Strangling, no.	1	0
Blast trauma, no.	1	0
Burn injury, no.	1	0
Total, no.	57	9

2. Methods

The study was conducted retrospectively in the emergency unit at the Inselspital, University Hospital Bern, Switzerland, a level 1 accident and emergency unit in an urban area, with approximately 32000 emergency department visits annually. All data were collected prospectively and entered in the centralised emergency room database (Qualicare) that is searchable with classified key words. All patients with the keywords “Polizist, Polizistin” (English: police officer) combined with “Tätlichkeit” (English: assault), “Gewalt” (English: violence), “Schlag” (English: blow), “Biss” (English: bite), “Stich” (English: stab), or “Schuss” (English: shot) between January 1, 2007, and December 31, 2010, were included in the present analysis. Patients were excluded from the analysis if the injuries were not related to violence (e.g., fall at home) or were related to illness (e.g., appendicitis). Baseline demographics (e.g., gender and age) were extracted as well as data regarding the injury patterns.

3. Results

During the study period, 57 police officers with injuries in the line of duty were admitted, of whom 46 were men and 11 women. The median age was 31 (range 20–60) years. The most frequent injury patterns that led to emergency room admission were blunt injuries (32/57), for example, bruises and contusions ($n = 20$), abrasions ($n = 3$), sprains ($n = 2$), and mild traumatic brain injuries ($n = 2$). Table 1 shows the affected body regions and the types of injury. In all, 48/57 patients were treated on an outpatient basis.

Bites accounted for 10/57 of the emergency admissions: dog bites ($n = 3$) affected the victim's hand in every case;

bites from human beings ($n = 7$) were on the hand, wrist, and forearm. Human scratches were reported in two police officers. 16 exposures with a risk of virus transmission were documented: 7 human bites, 3 needlestick injuries from drug abusers' needles, and 6 exposures to foreign blood and saliva. Following detailed questioning and counseling, HIV postexposure prophylaxis was prescribed in 2/16 of these patients before they were discharged. Serological testing for HBV, HCV, and HIV was negative in all of these cases.

12/16 cases were reported during the summer months, when the officers wore short-sleeved uniforms. Within the five-year period, two police officers were admitted twice to our emergency department. These individual admissions were one year and three years apart. No fatal injury was recorded.

4. Discussion

In the present study, we analysed the injury patterns found at the University Hospital Bern in 57 police officers after emergency admission in the line of duty. The gender distribution within our patient group represents the male/female police officer ratio in Switzerland. Our data show that almost one-third of patients were exposed to blood-borne pathogens. The most common injury patterns in this series were minor traumatic injuries, mostly associated with trauma to the extremities—as found by others in public safety providers [1, 11].

But in contrast to others, who have reported several intentional and unintentional police officer deaths each year in New York and London, we did not register any occupational police death (e.g., intentional gunshot wounds or motor vehicle collision) and only five penetrating injuries at all during the study period [12]. Needlestick injuries were also relatively rare in comparison to other studies [13, 14]. Not surprisingly, exposure to blood and body fluid occurred mostly during warm weather, when the officers were allowed to wear short-sleeved summer uniforms. Despite so few injuries reported, the officers are at risk for blunt trauma and penetrating trauma. Emergency departments have to be prepared and have to offer fast treatment and counseling for law enforcement personnel injured in the line of duty. Emergency departments can play a vital role in injury prevention by running and offering health educational courses. The university hospital emergency department at Inselspital has established a “hostile environment survival course” providing information on health issues to nonmedical personnel.

Unfortunately we are not able to compare our report to other like countries and/or regions, for example, via labor reports as most police and law enforcement officers in the USA are registered in unions, which would keep such records.

5. Limitations

The main limitation to this report is the small number of police officers (57/150000 admissions) in the 5-year study period and this may have biased the distribution pattern of

injuries. In the light of the daily reports in the lay media about assaulted police officers, it may be assumed that the majority of injured police officers were treated by general practitioners outside the hospital or treated by themselves. Furthermore, we had no information about the environments where injury occurred or any access to insurance compensation data.

6. Summary

Because of the lack of nationwide statistical reporting on police and law enforcement officers' injuries, our data are hardly verifiable. An adequate injury prevention strategy (e.g., protective clothing) is desirable, combined with more meticulous nationwide reporting of police officers' injuries.

Conflict of Interests

The authors hereby confirm that none of them has any conflict of interest to declare. No commercial interests have to be declared.

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