ORIGINAL ARTICLE

1700 Victims of intimate partner violence: characteristics and clinical outcomes

CL Lau 劉柱良
WM Ching 程慧明
WL Tong 唐慧玲
KL Chan 陳高凌
KL Tsui 徐國樑
CW Kam 甘澤華

Objective To investigate the demographics and clinical outcomes of intimate partner violence victims presenting to an emergency department.

Design Retrospective, observational study.

Setting Emergency department of a regional hospital in Hong Kong.

Patients Adults presented with intimate partner violence during years 1999 to 2004.

Results We assessed 1695 victims of intimate partner violence with a mean age of 39 (range, 18-84) years, of whom 87% were female. Most of the patients were in the age-group of 31 to 40 years and the overall male-to-female ratio was 1:7. In Tin Shui Wai and Yuen Long districts, such cases appeared to be on the increase. Nearly two thirds (65%) of all the victims presented to the emergency department outside the office hours of medical social workers. Approximately 10% had been abused once before, and 40% more than twice. The head (39%), face (30%), upper limbs (37%), and lower limbs (17%) were commonly the injured parts. The majority (73%) had mild injuries; severe injuries being relatively less common. The latter included lacerations or cuts (6.6%), nasal bone fractures (0.3%), limb fractures (0.8%), and ruptured tympanic membranes (0.9%). In-patient management was undertaken for 8% of the victims, due to physical injury in 68% of these individuals and psychological trauma in the remaining 32%. The hospital admission rate dropped from 12% in 2001 to 4% in 2004.

Conclusions Variations in demographic data had a significant impact on future service planning and management of intimate partner violence. Accident and Emergency Department and Emergency Medicine Ward services together with extended social worker support could provide timely, multidisciplinary care to meet the various needs of victims and subsequently reduce hospital admissions.

Key words
Battered women; Domestic violence; Emergency medical services; Prevalence; Spouse abuse

Hong Kong Med J 2008;14:451-7

Department of Accident and Emergency Medicine, Tuen Mun Hospital, Tuen Mun, Hong Kong
CL Lau, MRCSEd, FHKAM (Emergency Medicine)
WM Ching, MRCSEd, FHKAM (Emergency Medicine)
WL Tong, MRCSEd, FHKAM (Emergency Medicine)
KL Tsui, FRCS (Edin), FHKAM (Emergency Medicine)
CW Kam, FRCS (Edin), FHKAM (Emergency Medicine)
Department of Social Work and Social Administration, University of Hong Kong, Pokfulam Road, Hong Kong
KL Chan, PhD, RSW

Correspondence to: Dr CL Lau
E-mail: terrycllau@yahoo.com

Introduction

Intimate partner violence (IPV) is defined as "any behaviour within an intimate relationship that causes physical, psychological or sexual harm to those in the relationship".[1] Nowadays, intimidation can occur between current or former spouses, dating heterosexual couples, or those in homosexual relationships. These problems are not confined to the boundaries of home or family, and therefore the term 'intimate partner violence' seems much more appropriate in describing these complex situations than 'domestic violence' (a term used in the past). When abuse occurs repeatedly in the same relationship, this leads to battery, which is a worldwide problem that has raised much concern in recent years. In population-based surveys from around the world, 10 to 69% of women reported physical assault by the intimate male partner at some point in their lives. The percentage of women reporting assault in the previous 12 months varied from 3% or less in Australia, Canada and the United States to 38% in Korea, and up to 52% among Palestinians in the West Bank and Gaza Strip.[1]

In Hong Kong, the police or social workers referred most IPV victims with physical injuries to the Accident and Emergency Department (AED) for medical assessment. Victims of IPV identified by primary care physicians or in other out-patient settings were also referred to the AED for holistic management. Therefore, the AED was an ideal venue to study IPV in Hong Kong. Several local, small-scale studies had been performed to assess

1700位被親密伴侶暴力虐待的受害者：特徵和臨床結果

目的 研究被親密伴侶暴力虐待而入診急症室的受害者，其人口學資料及臨床結果。

設計 觀察回顧研究。

安排 香港一所地區醫院的急症室部門。

患者 1999至2004年期間，所有被親密伴侶暴力虐待的成年人 。

結果 被親密伴侶暴力虐待的受害者共1695人，平均年齡39歲（介乎18至84歲）；其中87%為女姓。大部份受害者屬於31至40歲的年齡組別，男女比例為1：7。天水圍及元朗地區的個案有上升趨勢。接近三分二（65%）的受害者在醫務社工的辦公時間外入診急症室。約10%受害者曾被虐一次，40%曾被虐超過兩次。受傷的身體部位普遍為頭部（39%）、面部（30%）、上肢（37%），以及下肢（17%）。大部份受害者（73%）只有輕微損傷；嚴重損傷相對較少，包括撕裂或刀傷（6.6%）、鼻骨折（0.3%）、四肢骨折（0.8%），以及鼓膜刺穿（0.9%）。8%受害者需入院接受治療，其中68%因身體損傷，32%因心理創傷。醫院入住率從2001年的12%下降至2004年的4%。

結論 受害者人口學數據的差異，對未來針對親密伴侶暴力虐待的服務計劃及處理相當重要。意外及急症部門和急症室服務，以及伸延社工的支援可提供迅速和跨部門的醫療服務，為各受害者提供適當治理，從而減低醫院入住率。

TABLE 1. Number of patients presenting with intimate partner violence (IPV) per year and corresponding gender ratios*

Year	No. of IPV victims	Male	Female	Male:female
1999	183	18	165	1:9
2000	230	29	201	1:7
2001	338	43	295	1:7
2002	332	35	297	1:8
2003	323	46	277	1:6
2004	289	37	252	1:7
Total	**1695**	**208**	**1487**	**1:7**

* Based on calculation from year 2001 to 2004, M:F ratio=1:7, no significant difference between years (Yates Chi squared test, P=0.64)

its prevalence in selected groups of the Hong Kong population. Chung et al[2] reported that 9% (10/112) of female attendees in the AED had experienced or witnessed battery. Leung et al[3] conducted a study in a local antenatal clinic and reported that 18% of pregnant women had a history of abuse, of whom 16% had been abused in the past year, 4% had been abused during their current pregnancy, and 9% had been sexually abused. Leung,[4] another local researcher, reported that 67% (10/15) of female participants attending a single parent group in a community centre in Tsuen Wan had been physically abused.

We conducted a 6-year observational study on IPV victims presenting to a high-patient-volume AED in Hong Kong, with the aim of assessing any changes in pattern, prevalence, demographic characteristics, and clinical outcomes.

Methods

This retrospective study was performed in an AED of a regional hospital in the New Territories of Hong Kong, which served a population of one million; during the study period yearly attendance at the AED ranged from 200 000 to 270 000.[5] The AED had a catchment area that included three main residential regions, namely Tuen Mun, Tin Shui Wai, and Yuen Long.

Patients aged 18 years or above presenting to the AED for evaluation and management of physical injuries related to IPV during the period 1 January 1999 to 31 December 2004 were assessed. Both self-reported and referred cases were included. Intimate partners were defined as married spouses or cohabitants. Subgroups of domestic violence (involving children siblings and elders) were excluded. Victims of IPV were managed in our department according to a preset management checklist, which guided the physician on assessment and collection of relevant information. Records of all cases of IPV were retrieved through the hospital computer database (AEIS, CDARS). Investigators, trained students, and nurses extracted demographic and clinical data from medical records, management checklist and hospital computer database via the clinical information system. Patients who died were not included.

Descriptive statistics about the number of patients, percentage of the total, mean, standard deviation (SD), and range were used to summarise the data. Statistical analysis was performed using the Statistical Package for the Social Sciences (Windows version 12.0; SPSS Inc, Chicago [IL], US). Ethics approval for study was obtained from Cluster Clinical and Research Ethics Committee.

Results

A total of 1695 adult patients presented with IPV-related physical injuries during the study period. The number of reported cases per year ranged from 183 to 338 (Table 1). The mean age of the subjects was 39 (SD, 11) years and ranged from 18 to 84 years. The peak incidence occurred in the age-group of 31 to 40 years, which constituted 40% of all cases. The age-

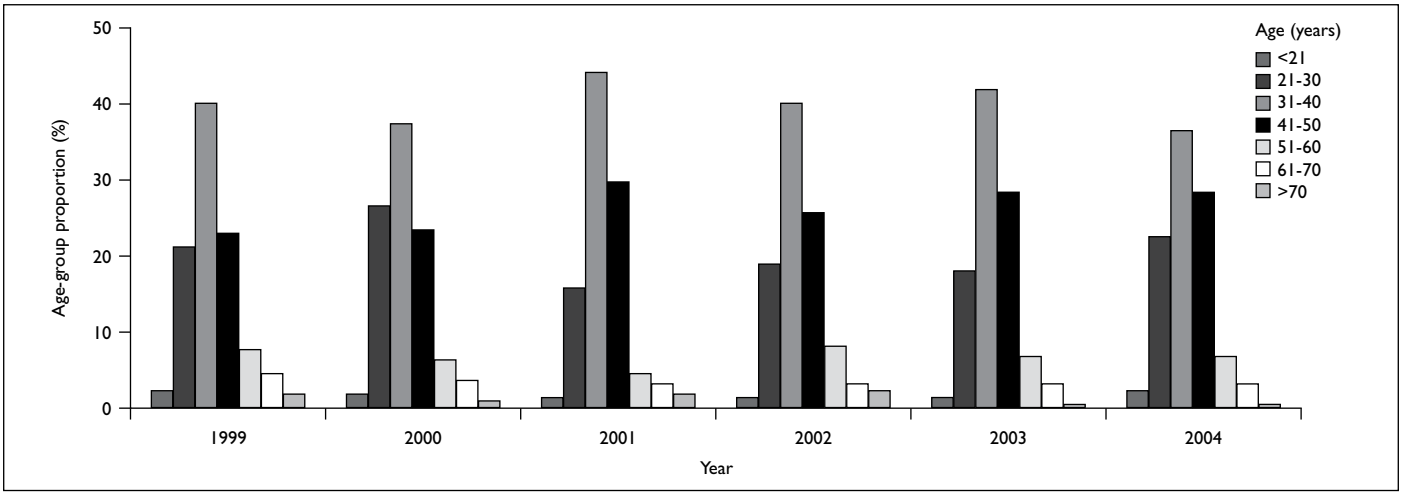

FIG 1. Age-group distribution of intimate partner violence victims

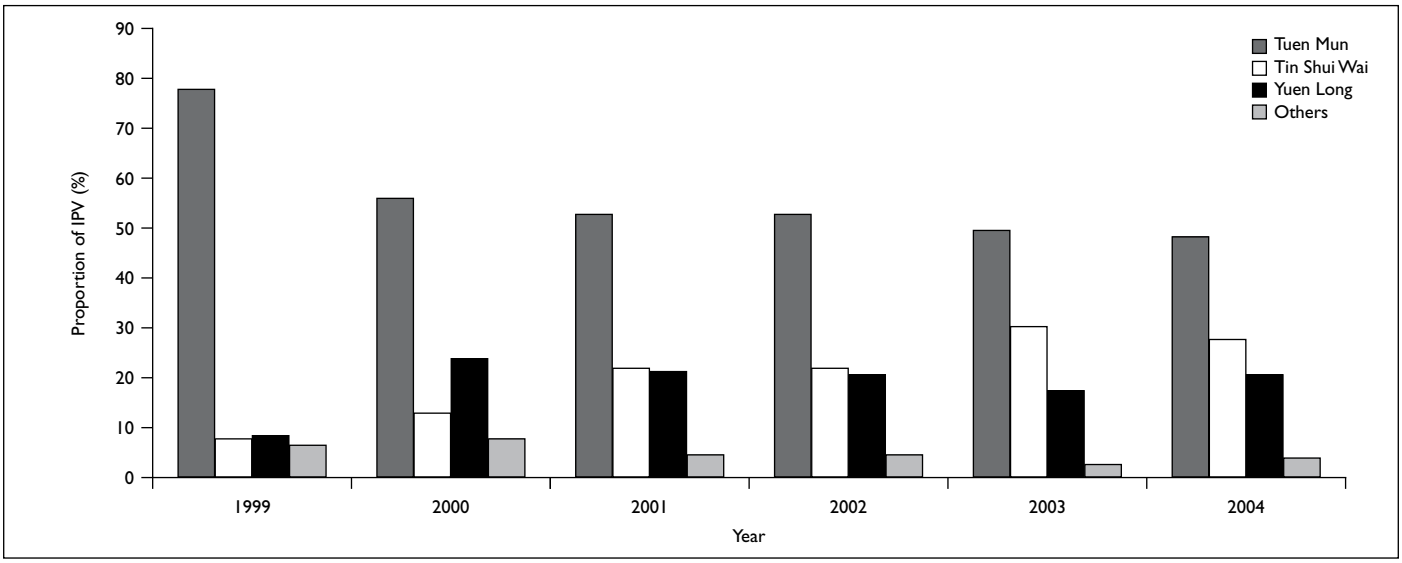

FIG 2. Regional distribution of patients presenting with intimate partner violence (IPV)

group 41 to 50 years accounted for 26% of cases, and those aged 21 to 30 years accounted for 21% (Fig 1). The majority of IPV victims (87%) were female; the overall male-to-female ratio being 1 to 7. Both the absolute number and the proportion of male victims remained steady from 2001 onwards (Table 1). Most of the IPV victims were married spouses (81%). Over 95% of the victims lived in three main residential regions within the catchment area, namely Tuen Mun, Tin Shui Wai, and Yuen Long. The change in proportion of cases among these three regions is shown in Figure 2. The proportion of victims living in Tuen Mun district decreased while those from Tin Shui Wai and Yuen Long increased throughout the study period. The monthly distribution ranged from 7 to 10%, with relatively lower rates in February to April and higher rates in May to July. Most of the victims (65%) presented to the AED outside the office hours of medical social workers (7am to 5pm); higher rates of attendance (40%) ensued between the period 5pm to 12am.

Physical injuries were classified according to the attending emergency physicians' description in the clinical notes, as: mild (tenderness, haematoma, bruise, abrasion or erythema), severe (superficial laceration, cut wound, small bone fracture, scald), and life-threatening. Approximately 73% of IPV victims had mild physical injuries, 10% were severe, and 1% were life-threatening. The latter included: chop injuries with lacerations, head injury with vault fracture of skull, and neck strangulation (Table 2). Approximately 22% of IPV victims attended the AED after abuse for the first time; 10% had been abused once before and 40% of the victims had been abused repeatedly. Attack by bare hands or feet (67%) were

TABLE 2. Types of injuries associated with intimate partner violence

Type of injury	No.
Tenderness	810 (48%)
Erythema	173 (10%)
Haematoma/bruise	539 (32%)
Abrasion	360 (21%)
Laceration/cut	112 (7%)
Nasal bone fracture	5 (0.3%)
Limb fracture	13 (0.8%)
Scald/chemical burns	8 (0.5%)
Ruptured tympanic membrane	16 (0.9%)
Epistaxis	8 (0.5%)
Life-threatening injuries	15 (0.9%)
Neck strangulation	6
Severe head injury	5
Chopped by knife	3
Pulled to fall from a height	1
No wound	30 (2%)

TABLE 3. Disposal of patients enduring intimate partner violence

Disposal	No.
Discharge	
MSW* assessment in AED	305 (18%)
Crisis Intervention Team assessment in AED	111 (7%)
Phone contact to Harmony House in AED	275 (16%)
MSW referral with safe shelter available	250 (15%)
MSW referral with low risk and return home	201 (12%)
Left	22 (1%)
Discharge with acknowledgement of medical advice	68 (4%)
Other discharged patients with data missing	325 (19%)
Admission	
Psycho-social problems	44 (3%)
Physical injury	94 (6%)
Total	**1695 (100%)**

* MSW denotes medical social worker, and AED Accident and Emergency Department

more common than attacks with objects (18%). Body regions, which were exposed or used defensively were the most commonly injured, including: the head (39%), face (30%), upper limbs (37%), and lower limbs (17%).

The majority of IPV victims presented with minor injuries (tenderness, haematoma, bruise, abrasion, or erythema). Severe injuries (laceration, cut wound, fracture, scald) were less common (Table 2). Less than 2% of IPV victims had no external wound (Table 2). Radiographic studies of various regions were undertaken in over half of our patients (53%); five (0.3%) also underwent computed tomography of the brain to assess head injuries. Nursing procedures/treatment provided included: wound dressings (24%), suturing of wounds (4%), and removal of foreign bodies (0.1%). A plaster was applied to stabilise a fracture in only three of the victims.

Some of these IPV victims (8%) were admitted after initial management in the AED for physical injuries (6%) or psycho-social assessment (3%). Support from social workers was considered vital, for which available services included: the medical social worker service in the AED (during office hours), and the Crisis Intervention Team (CIT) that functioned in the AED from 7pm to mid-night every Tuesday to Saturday (since August 2001). Intervening periods were supported by a 24-hour counselling service (telephone hotline to Harmony House). If safe shelter was available or the risk of returning home was deemed low, victims were discharged with an out-patient referral to the medical social worker for continuity of psycho-social support. Among those discharged, only 18% underwent medical social worker assessment in the AED before discharge. This was because the majority of IPV victims attended outside the office hours of social workers. Depending on the time of presentation, the CIT managed 7% of the IPV victims, and 16% were accessed via Harmony House through their 24-hour telephone hotline. Only 15% of IPV victims received safe shelter from relatives or friends and 12% were considered to be at low risk and returned home, with an out-patient referral to medical social workers. Ninety (5%) IPV victims, however, declined the service from the AED or social workers and either left (1%) or were discharged (4%) after acknowledging the medical advice they were given (Table 3).

Among the 138 IPV victims who underwent in-patient management, 50 (36%) were admitted to the neurosurgical wards, 24 (17%) to surgical wards, and 18 (13%) to orthopaedics and traumatology wards. Two victims were directly transferred to psychiatric wards and 42 (30%) were admitted to medical wards for later psychiatric assessment or other psycho-social support. The overall admission rate of IPV victims dropped from 12% in 2001 to 4% in year 2004 (Table 4), which was attributed to a remarkable decrease in medical admission from 10 cases to two cases in the respective years.

Discussion

Intimate partner violence was defined as "any behaviour within an intimate relationship that resulted in physical, psychological or sexual harm to those in the relationship".[1] This violence could occur among heterosexual or same-sex couples and did not necessarily entail sexual intimacy.[6] In the United States, the estimated prevalence of IPV ranged from

TABLE 4. Yearly admissions for intimate partner violence (IPV) according to specialty*

Year	No. of IPV	ENT	Gynae	MED	PSY	NS	O&T	Surgery	No. (%) of admission
1999	183	0	0	5	0	10	0	1	16 (9)
2000	230	0	0	9	1	7	2	4	23 (10)
2001	338	1	0	15	0	14	6	6	42 (12)
2002	332	0	0	10	0	10	2	7	29 (9)
2003	323	0	1	1	0	6	3	5	16 (5)
2004	289	0	0	2	1	3	5	1	12 (4)
Total	**1695**	**1**	**1**	**42**	**2**	**50**	**18**	**24**	**138 (8)**

* ENT denotes Ear, Nose and Throat; Gynae Gynaecology; MED Internal Medicine; PSY Psychiatry; NS Neurosurgical; and O&T Orthopaedics and Traumatology

22 to 35% in studies from emergency departments, and a similar rate (18%) was encountered in a study from a general surgery trauma service.[7] In a recent telephone survey by the Centers for Disease Control and Prevention, approximately one in four women and one in seven men reported some form of lifetime IPV victimisation.[8] According to the *Swiss 2000 Health Inquiry*, one in 10 persons in Switzerland admitted being a victim of violence during the recent 1 year, and a similar rate (11%) was reported in a study by Hofner et al.[9] The first official study in Hong Kong commissioned by Social Welfare Department in 2005 reported that the prevalence of physical assault amounting to spouse battering was 10%.[10] The AED is a suitable place to study IPV cases and appreciate its risk factors.[11] In the United Kingdom, about 1% of those attending AEDs were related to IPV.[12]

In this study, we encountered an increasing number of cases from 183 in 1999 to over 300 from 2001 and beyond. However, interpretation of this trend requires caution. The sharp rise of reported IPV cases in years 2000 and 2001 could not simply be explained by an increased awareness of the problem in the general population or to a suspected increase in absolute number of IPV cases in the studied region. Interestingly, during the year 1999 and the first half of 2000, another regional hospital (Pok Oi Hospital) was providing an emergency service in the New Territories West region. Thus, from 2001 onwards, all IPV cases could only attend a single AED, which presumably accounted for the admission trend (about 320 cases per year) noted in the years 2001 to 2004.

The prevalence rates of IPV varied greatly according to the age of the victims. In the United States, relatively younger women (aged 16 to 24 years) were the most vulnerable.[13] This was similar to our IPV findings where most instances (40%) were in the age-group 31 to 40 years who were the relatively younger individuals in our population. The mean age of our subjects was 39 years, which was similar to the mean age of 37 reported from another local study[11] and 38 reported in a study from the United Kingdom.[12]

Gender was highly related to IPV; 88% of our subjects were women, which was similar to reports from the United States (85%)[13] and Singapore (78%).[14] Thus, women are reported to be at significantly greater risk than men for being victims of domestic violence.[15] In a multi-country study, at some point in their lives 15 to 71% of ever-partnered women reported physical or sexual violence, or both, by an intimate partner.[16] Male victims of IPV are not uncommon, and a recent study in Singapore revealed that in 9% of domestic violence instances the victims were male.[17] The overall male-to-female ratio in our study was 1:7. There was no significant difference in the ratios between the years 2001 and 2004 (Yates Chi squared test, P=0.64); data for the years 1999 and 2000 were excluded for already-mentioned reasons. It is tempting to explain our findings in light of the traditional norms that limit gender equality for Chinese women, who might therefore be at increased risk of IPV.[18] However, the territory-wide household survey of Chan et al[10] showed that the gender ratio of abused victims was much smaller.[10] These findings suggest that male victims of IVP may be more reluctant to seek help or attend emergency medical services. They might also reflect unequal awareness and readiness of professionals like social workers or police to refer male as compared to female victims for treatment. We therefore urge greater efforts to increase awareness of male IPV victims in Hong Kong.

The majority of IPV victims were married spouses, accounting for about 95% of all cases in the years 2003 and 2004, which was similar to the rate reported in a local study conducted in 1998.[19] The residential area of an individual was an important factor related to IPV. That the proportion of victims from the Tuen Mun district decreased, whilst it increased in Tin Shui Wai and Yuen Long districts might indicate a change in the composition of age-groups in the population. Alternatively, changing socio-economic class proportions could have influenced IPV risks in the involved areas. These demographic changes indicate greater demand for family and social support services in Tin Shui Wai and Yuen Long districts. Notably, around 5% of victims treated in our department were from other regions of Hong Kong. Connection to social support networks and follow-up medical services in other regions must

be established, so as to maintain continuity of patient care. Territory-wide registration is important for case referral and follow-up (medical and social), and is also vital for the prevention of recurrent IPV. In Hong Kong, the Social Welfare Department is responsible for the central surveillance and registration of IPV. Essential statistics, including new cases per month and their distribution by regions, are reported and can be accessed online. However, since it is not mandatory to report IPV, victims may choose not to report to the police and refuse all social services. New surveillance strategies like screening high-risk groups and compulsory reporting (by health care workers or social workers) may be considered to help gather better information. Such statistics would enable different stakeholders to access a more accurate and comprehensive registry data in Hong Kong.

The head, neck, and face were the common body parts subject to physical injury from IPV, which was similar to findings from AEDs in other countries detailing IPV in women.[20,21] In Hong Kong, the majority of the injuries were minor and similar findings were reported in previous local studies.[19,22] Physical injuries were the main reason for admissions to surgical specialties, whereas a significant number of IPV victims were admitted to medical wards for psychological problems (warranting counselling, acute stress reaction management, and psychiatric consultation) or to deal with other social problems (eg arrangement of a safe shelter). The significant decrease in overall admission rates from 9% in 2002 to 4% in 2004 did not signify a decrease in the severity of IPV injuries during that period. This change could have resulted from the commencement of an Emergency Medicine Ward (formerly called Emergency Observation and Pre-admission Ward since 2003) service in our department. This ward provided extended services ranging from social worker and psychiatrist assessments and services by non-government organisation services (like the CIT in Harmony House). Thus, many IPV victims are not admitted to medical wards just for social reasons or to wait for interventions from social services.

Limitations

Our study sample was a convenience sample and relied on reporting by the patient or by a suspicious physician. The problem of under-reporting could not be assessed in this study. Use of a validated screening protocol such as the Chinese Abuse Assessment Screen[23] might increase the reporting rate of IPV. Possible deaths related to IVP were not included, due to difficulties in making the diagnosis and some of the deaths were directly handled by forensic pathologist without involvement of the emergency department, indicating that severe injuries might have been underestimated. An analysis of murders as a joint project with the police may facilitate an understanding of the true prevalence of IPV as well as high-risk factors. As in other retrospective studies, we faced the problem of missing data and possible errors in outcome classification, especially in the year 2002. The interpretation of yearly trends from 1999 to 2001 requires caution. The effect of the AED service suspension of Pok Oi Hospital in May 2000 has been highlighted. Furthermore, our study represents the situation from only a single region of Hong Kong. Demographic and socio-economic variation in different areas or clinical settings could well give rise to quite diverse results.

Conclusion

Emergency physicians and nurses continuously come across victims of IPV in their daily practice. Demographic data related to IPV might help in the planning of medical service, resource allocation, and future prevention strategies. Most victims attended the AED during night hours and immediate social worker services were not available. Nurses in AED have significant roles in the screening of high-risk IPV victims. They triage and provide immediate psychosocial support. Extended services from social workers have a vital role in the holistic management of such victims. The changing distribution of victims from different residential areas indicates that surveillance and availability of a central registry, accessible to all stakeholders, appears vital for proper allocation of resources and success in combating IPV. Our study shows that most of the victims endure mild physical injuries, but with significant psychosocial trauma and/or other problems. The AED acts as a 'safety net' for society, and should provide timely, multidisciplinary, and comprehensive support to address physical, psychological, and social problems of IVP victims at an early and acute phase. The Emergency Medicine Ward has a vital role in providing not only a shelter but also an ideal place to fulfil these needs. A multi-centred study to look at territory-wide IPV cases in Hong Kong is needed. Studies to investigate trends in different subgroups (males, repeat victims), injury severity, IPV-related mortality, outcomes, factors associated with recurrent IPV, and the effectiveness of treatment offered to abusers are all vital to enhancing management and prevention.

Acknowledgements

The authors would like to thank Ms Janet Ng, Ms Fung-ling So, Ms Ah-yung Chan, the nursing staff of the AED, for assisting in the data input, and Ms Janna Lai, CIT Supervisor of the Harmony House, for offering information about IPV referrals from AED of different hospitals, police, and hotlines.

References

1. Krug EG, Dahlberg LL, Mercy JA, Zwi AB, Lozano R, editors. World report on violence and health. Violence by intimate partner. Geneva: World Health Organization; 2002:87-113. WHO website: http://whqlibdoc.who.int/hq/2002/9241545615.pdf. Accessed 15 May 2008.
2. Chung MY, Wong TW, Chan TF, Lau CC. A study on the prevalence of domestic violence among female patients in an emergency department. Hong Kong J Emerg Med 1997;4:82-4.
3. Leung WC, Leung TW, Lam YY, Ho PC. The prevalence of domestic violence against pregnant women in a Chinese community. Int J Gynaecol Obstet 1999;66:23-30.
4. Leung PS. Domestic violence among the female population in Tsuen Wan district. The Hong Kong Nursing Journal 2001;37:17.
5. Tuen Mun Hospital A&E attendance statistics in Accident and Emergency Information System. Hong Kong.
6. Tjaden P, Thoennes N. Extent, nature, and consequences of intimate partner violence: findings from the National Violence Against Women Survey. Washington DC: Department of Justice; 2000. Website: http://www.ojp.usdoj.gov/nij/pubs-sum/181867.htm. Accessed 15 May 2008.
7. Melnick DM, Mai RF, Blow FC, et al. Prevalence of domestic violence and associated factors among women on a trauma service. J Trauma 2002;53:33-7.
8. Breiding MJ, Black MC, Ryan GW. Prevalence and risk factors of intimate partner violence in eighteen U.S. states/territories, 2005. Am J Prev Med 2008;34:112-8.
9. Hofner MC, Python NV, Martin E, Gervasoni JP, Graz B, Yersin B. Prevalence of victims of violence admitted to an emergency department. Emerg Med J 2005;22:481-5.
10. Chan KL, Chiu MC, Chiu LS. Study on child and spouse battering. Report on findings of household survey. 2005. [A Consultancy Study Commissioned by the SWD of the HKSAR]. Social Welfare Department website: http://www.swd.gov.hk/doc/family/Report%20on%20findings%20of%20Household%20Survey.pdf. Accessed 15 May 2008.
11. Tsui KL, Chan AY, So FL, Kam CW. Risk factors for injury to married women from domestic violence in Hong Kong. Hong Kong Med J 2006;12:289-93.
12. Boyle A, Todd C. Incidence and prevalence of domestic violence in a UK emergency department. Emerg Med J 2003;20:438-42.
13. Rennison CM. Intimate partner violence and age of victim, 1993-1999. U.S. Department of Justice's Bureau of Justice Statistics – Special Report. 2001 Oct p.1. Website: http://www.ojp.usdoj.gov/bjs/abstract/ipva99.htm. Accessed 15 May 2008.
14. Chan KC, Seow E, Lau G, Chan SP, Tham KY. Female trauma patients in the emergency department: should their injury prevention programme be different? Hong Kong J Emerg Med 2003;10:13-8.
15. Roberts GL, O'Toole BI, Raphael B, Lawrence JM, Ashby R. Prevalence study of domestic violence victims in an emergency department. Ann Emerg Med 1996;27:741-53.
16. Garcia-Moreno C, Jansen HA, Ellsberg M, Heise L, Watts CH; WHO Multi-country Study on Women's Health and Domestic Violence against Women Study Team. Prevalence of intimate partner violence: findings from the WHO multi-country study on women's health and domestic violence. Lancet 2006;368:1260-9.
17. Seow E, Foo CL. A profile of male domestic violence victims presenting to an emergency department in Singapore. Hong Kong J Emerg Med 2006;13:212-6.
18. Xu X, Zhu F, O'Campo P, Koenig MA, Mock V, Campbell J. Prevalence of and risk factors for intimate partner violence in China. Am J Public Health 2005;95:78-85.
19. Wong TW, Chung M, Lau CC, et al. Victims of domestic violence presenting to an accident and emergency department. Hong Kong Pract 1998;20:107-12.
20. Perciaccante VJ, Ochs HA, Dodson TB. Head, neck, and facial injuries as markers of domestic violence in women. J Oral Maxillofac Surg 1999;57:760-3.
21. Ochs HA, Neuenschwander MC, Dodson TB. Are head, neck and facial injuries markers of domestic violence? J Am Dent Assoc 1996;127:757-61.
22. Longstaff MJ, Lo GC. Wife battering in Hong Kong. Journal of the Hong Kong Medical Association 1985;37:23-6.
23. Tiwari A, Fong DY, Chan KL, Leung WC, Parker B, Ho PC. Identifying intimate partner violence: comparing the Chinese Abuse Assessment Screen with the Chinese Revised Conflict Tactics Scales. BJOG 2007;114:1065-71.