**Introduction**

Child abuse is a major public health and social welfare problem in Western high-income countries such as the United Kingdom, the United States, Canada, and Australia.\(^1\)\(^,\)\(^2\) Also in Japan, recently, the number of child abuse cases reported to child guidance centers (CGCs), which are equivalent to child protection agencies in other countries, has been increasing significantly. There are 209 CGCs located throughout the country, which have expressed concern about the expanding and serious social problem of child abuse, with the number of reported cases of child abuse exceeding 100,000 in the year 2016.

Physical abuse is often associated with external injuries, manifesting with various symptoms such as severe headache or stomachache, and such subjects often visit hospitals.\(^3\)\(^,\)\(^4\) In recent years, child abuse prevention teams (CAPTs) have been established at most university hospitals or large children’s hospitals for the investigation of suspected cases of abuse or neglect. On the other hand, the number of general hospitals that have established CAPTs still remain low.

A CAPT was established at our hospital in December 2011, after the Revised Organ Transplant Law was enforced in July 2010. Although the law allowed organ donation after brain death by persons younger than 15 years of age, it prohibited inclusion of abused children as donors. Since our hospital is a designated emergency and critical care center and an organ donation hospital as well, our CAPT has the task of excluding abused children as organ donors. We report on the activities of our CAPT during the past 5 years and discuss the significance of a CAPT in a general hospital in our country.

**Method**

The Japanese Red Cross Ashikaga Hospital is a general hospital located in Tochigi prefecture 70 km north of Tokyo, the capital city of Japan. The emergency room (ER) at our hospital annually deals with approximately 2300 patients under 15 years of age, and approximately 30% are accident victims. The doctors on night duty are required to report patients who are suspected to be victims of abuse or neglect to the CAPT. The CAPT consists of pediatrician (chairperson), ER doctor, neurosurgeon, orthopedist, plastic surgeon, gynecologist, certified nurse specialist, social worker, and clerical staff. After referral of the patients, the CAPT discusses the background of the abuse or neglect and decides about notification of the case to the CGC and/or police, as necessary.

Of the cases of abused children reported to the CAPT between January 2012 and December 2016, the patient profile, type of abuse, related clinical department, abuser, notification to the CGC, and the survival/death of the child were reviewed.

**Results**

Table 1 shows the profiles of 20 patients under 18 years of age that were reported to the CAPT because of suspected abuse or neglect. The following were the types of abuse reported: physical abuse (13 cases), sexual abuse (4 cases), neglect (2 cases), and psychological abuse (1 case; Table 2). Of the aforementioned 20 cases, 13 cases (including 12 cases of physical abuse and 1 case of sexual abuse) visited the ER at nighttime or on holidays, and they were referred to the CAPT by the following day. At our ER, 2909 accident victims under 16 years of age were seen between January 2012 and December 2016. Consequently, the ratio of abuse or neglect was approximately 0.4% of all pediatric accident victims.
| Case | Date of Occurrence | Age/Gender | Type of Abuse | Clinical Department | Abuser | Admit | Hospitalization (Duration) | Notification | Survival | Comments |
|------|--------------------|------------|---------------|---------------------|--------|-------|-----------------------------|-------------|----------|----------|
| 1    | January 2012       | 5 months/male | Physical (scald burn) | Plastic surgery | Mother | O | + (21 days) | CGC | Survival | Occipital scald burn with hot water |
| 2    | February 2012      | 7 years/female | Sexual | Gynecology | Boyfriend of mother | C | – | CGC, police | Survival | Abuser was arrested |
| 3    | May 2012           | 9 months/male | Physical (head trauma) | Neurosurgery | Mother | – | – | CGC | Survival | Acute and chronic subdural hematoma by accidental fall |
| 4    | May 2012           | 17 years/female | Sexual | Psychiatry | Father | O | + (2 days) | CGC | Survival | Forced to have sexual relationship and escaped from father |
| 5    | July 2012          | 17 years/female | Sexual | Gynecology | Acquaintance | – | – | CGC, police | Survival | Sexual assault by 2 men and emergency contraceptive was prescribed |
| 6    | November 2012      | 17 years/male | Physical (facial bruise) | Neurosurgery | Father | O | – | No | Survival | Punishment for breaking a promise |
| 7    | December 2012      | 4 years/male | Physical (fracture of both feet) | Orthopedics | None | – | – | No | Survival | Jumped off the second floor; voluntarily imitated Superman |
| 8    | February 2013      | 1 year/male | Physical (facial bruise) | Plastic surgery | Mother | – | – | No | Survival | Fell down accidentally while holding her son |
| 9    | April 2013         | 17 years/female | Psychological | Emergency | Mother, elder brother | O | – | Police | Survival | Hyperventilation after abusive words by family |
| 10   | September 2013     | 7 years/male | Physical (head trauma) | Pediatrics | Father | A | + (3 days) | No | Survival | Flung away after quarrel with father |
| 11   | November 2014      | 10 months/female | Physical (drowning) | Pediatrics | Mother | – | + (3 days) | CGC | Survival | Fell to bathtub when mother was away for 5 minutes |
| 12   | December 2014      | 3 years/female | Physical (facial bruise) | Pediatrics | Mother | – | – | CGC | Survival | Facial subcutaneous hemorrhage noticed by pediatrician |
| 13   | March 2015         | 8 months/female | Physical (left femoral fracture) | Orthopedics | Parents | – | + (31 days) | Public health nurse | Survival | Parents noticed their baby cried loud when diaper was changed |
| 14   | May 2015           | 2 years/male | Physical (abdominal injury) | Emergency | Father | C | – | CGC, police | Death | Hemorrhagic shock due to rupture of mesenteric artery |

(continued)
| Case | Date of Occurrence | Age/Gender | Type of Abuse          | Clinical Department | Abuser   | Admit | Hospitalization (Duration) | Notification | Survival | Comments                                                                 |
|------|--------------------|------------|------------------------|---------------------|----------|-------|-----------------------------|--------------|----------|--------------------------------------------------------------------------|
| 15   | June 2015          | 15 years/ female | Physical (head trauma) | Neurosurgery        | Father   | O     | −                           | CGC          | Survival | Father hit a head to encourage his daughter as an athlete               |
| 16   | September 2015     | 8 years/ male  | Physical (abdominal injury) | Pediatrics        | Stepfather | A    | + (4 days)                 | CGC          | Survival | Transferred from hospital to shelter house                               |
| 17   | September 2015     | 13 years/ male | Neglect                 | Pediatrics        | Mother   | O     | −                           | CGC          | Survival | Grandmother claimed mother did not take care of son                     |
| 18   | April 2016         | 17 years/ female | Physical (right humeral fracture) | Psychiatry | Mother   | —     | + (42 days)                | CGC          | Survival | Jumped off the third floor to attempt suicide after trouble with mother |
| 19   | November 2016      | 7 years/ female | Neglect                 | Pediatrics        | Parents  | O     | −                           | CGC          | Survival | Medical neglect in patient with refractory nephrotic syndrome requiring essential treatment |
| 20   | December 2016      | 14 years/ female | Sexual                  | Gynecology        | Unknown  | —     | —                           | Police       | Survival | After sexual assault, emergency contraceptive was prescribed by gynecologist |

Abbreviations: CAPT, child abuse prevention team; CGC, child guidance center; O, observed guilt; C, convicted; A, admitted guilt.
In 16 of the 20 cases (80%), the mother, father, or another family member was the abuser or suspected abuser. In 3 cases of sexual abuse, the abuser was a person outside the family, and in the remaining 1 case of physical abuse, no abuser was identified. Seven clinical departments, including the departments of pediatrics, neurosurgery, gynecology, orthopedics, plastic surgery, psychiatry, and emergency medicine were involved in the care of the patients reported to the CAPT. Six cases of physical abuse and 1 case of sexual abuse needed hospitalization, with the duration of hospitalization ranging from 2 to 42 days. Sixteen of the 20 cases (80%) were notified to the CGC, the public health nurse at the Ashikaga City Office, or the Ashikaga Police. The remaining 4 cases were not notified to any of these administrative agencies, based on the judgment of the CAPT. In these 4 cases of physical abuse (cases 3, 8, 11, and 12), a closer scrutiny revealed that they were cases of true accidents. Later, the parents of these 4 patients of accidental injury received appropriate instructions.

**Discussion**

It was found from this study that the CAPT in a general hospital, comprising staff from various medical departments, was effective in detecting and communicating child abuse and neglect. Previously, cases of abuse or neglect were handled individually rather than systematically at our hospital. As they were not required to be reported prior to the establishment of the CAPT, the true incidence of victims of abuse or neglect that visited our hospital remained unclear. The number of reports of abuse or neglect increased after the CAPT was established. The burden on the doctors in charge or on night duty also significantly reduced, because the CAPT took over handling of all the problems of the cases after they were reported to the CAPT.

Through the activities of the CAPT, it was recognized that the CAPT took care of not only nonaccidental serious abuse but also of the 4 cases of accidental injuries after careful scrutiny. In general, accidental injury or harm in childhood seems to result from a caregiver’s carelessness or lack of knowledge concerning nursing. In such cases, appropriate instruction to the caregivers may help in preventing recurrence of injury or maltreatment.

This study showed that 13 of the 20 cases were first seen in the ER of our hospital. Many patients visit the ER of a general hospital, irrespective of the age or nature of the diseases. Even under such busy conditions, careful attention should be paid not to overlook child abuse or neglect when we see pediatric patients, notably pediatric injuries. For this purpose, improved awareness of ordinary hospital staff about the CAPT should be promoted.

Seven clinical departments were involved in the care of the patients reported to the CAPT in this study. The department of pediatrics, the most frequently involved of the 7 clinical departments in the care of victims of abuse, was involved in the management of 6 cases. In many other cases too, the pediatricians were consulted by the doctors of various other clinical departments. Thus, today’s pediatricians are often confronted with victims of child abuse and neglect. Since the remarkable increase in the number of child abuse reports is expected to persist in this country, the pediatrician of the next generation should be more aware of the magnitude of the child abuse problem. Pediatricians working in general hospitals in Japan, as well as those working in other Western countries, are required to play a leading role in the detection, diagnosis, and protection of suspected victims of child abuse.

**Author Contributions**

YK: Contributed to conception and design; drafted manuscript; gave final approval; agrees to be accountable for all aspects of work ensuring integrity and accuracy.

MT: Contributed to acquisition; critically revised manuscript; gave final approval; agrees to be accountable for all aspects of work ensuring integrity and accuracy.

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**Table 2. Summary of the 20 Patients.**

| Age             | 5 months to 17 years (median = 7 years) |
|-----------------|-----------------------------------------|
| Gender          | 9 Males and 11 females                  |
| Type of abuse and abuser | Physical 13 (mother 6, father 4, parents 1, stepfather 1, none 1) |
|                 | Sexual 4 (person except family 3, father 1) |
|                 | Neglect 2 (mother 1, parents 1)          |
|                 | Psychological 1 (mother and elder brother) |
| Related departments | Pediatrics 6, neurosurgery 3, gynecology 3, orthopedics 2, plastic surgery 2, psychiatry 2, emergency 2 |
| Hospitalization | 7                                       |
| Notification    | Child Guidance Center 13, Ashikaga Police 5 (3 overlap with Child Guidance Center), public health nurse 1, no notification 4 |
YI: Contributed to acquisition; critically revised manuscript; gave final approval; agrees to be accountable for all aspects of work ensuring integrity and accuracy.

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**References**
1. Gilbert R, Widom CS, Browne K, Fergusson D, Webb E, Janson S. Burden and consequences of child maltreatment in high-income countries. *Lancet*. 2009;373:68-81.
2. Gilbert R, Fluke J, O’Donnell M, et al. Child maltreatment: variation in trends and policies in six developed countries. *Lancet*. 2012;379:758-772.
3. Pless IB, Sibald AD, Smith MA, Russell MD. A reappraisal of the frequency of child abuse seen in pediatric emergency rooms. *Child Abuse Negl*. 1987;11:193-200.
4. Teeuw AH, Derkx BH, Koster WA, van Rijn RR. Educational paper: detection of child abuse and neglect at the emergency room. *Eur J Pediatr*. 2012;171:877-885.
5. DiScala C, Sege R, Li G, Reece RM. Child abuse and unintentional injuries: a 10-year retrospective. *Arch Pediatr Adolesc Med*. 2000;154:16-22.
6. Warrington SA, Wright CM, ALSPAC Study Team. Accidents and resulting injuries in premobile infants: data from the ALSPAC study. *Arch Dis Child*. 2001;85:104-107.
7. Kellog ND; Committee on Child Abuse and Neglect. Evaluation of suspected child physical abuse. *Pediatrics*. 2007;119:1232-1241.
8. Flaherty EG, Sege R, Price LL, Christoffel KK, Norton DP, O’Connor KG. Pediatrician characteristics associated with child abuse identification and reporting: results from a national survey of pediatricians. *Child Maltreat*. 2006;11:361-369.
9. Krugman RD, Leventhal JM. Confronting child abuse and neglect and overcoming gaze aversion: the unmet challenge of centuries of medical practice. *Child Abuse Negl*. 2005;29:307-309.
10. Marchand J, Deneyer M, Vandenplas Y. Detection, diagnosis, and prevention of child abuse: the role of the pediatrician. *Eur J Pediatr*. 2012;171:17-23.