



Scientific paper

Isolation and unnatural death of elderly people in the aging Japanese society



Mayuko Nomura^{a,b}, Stuart McLean^a, Daisuke Miyamori^a, Yasuhiro Kakiuchi^a, Hiroshi Ikegaya^{a,*}

^a Department of Forensic Medicine, Graduate School of Medical Science, Kyoto Prefectural University of Medicine, Japan

^b Department of Anesthesiology, Graduate School of Medical Science, Kyoto Prefectural University of Medicine, Japan

ARTICLE INFO

Article history:

Received 25 June 2015

Received in revised form 8 December 2015

Accepted 12 December 2015

Keywords:

An aging Japanese society

Unnatural death at home

Solitary death

Cause of death

Postmortem time

ABSTRACT

Purpose: Japanese society has reached an unprecedented level of aging, with elderly people accounting for 25.1% of the population in October 2013. These changes have created concerns regarding deaths among the elderly. In this study, we compared recent forensic autopsy cases with cases from about 20 years ago, with the goal of understanding the context of death among the elderly within Japanese society today.

Methods: We investigated the forensic autopsy records of 297 people aged 65 years or above. In order to examine the effect of residential circumstances, we classified these cases into two groups: people who lived alone (group A) and those who lived with their family (group B). Forty-five of these autopsy cases were conducted about 20 years ago (1989 to 1993) and 252 cases were recent (2009 to 2013). The cases were limited to people who had been found dead or in a critical situation at home. We investigated the first finder, the period of time elapsed between death and discovery, and the cause of death.

Results: The incidence of the first finder being a family member was more than 20% greater in group B compared with group A. The proportions of cases for which it took more than three days for someone to find the body or an abnormal situation were about 14% and 7% in groups A and B, respectively, 20 years ago, and about 48% and 19% among the recent cases. These proportions were significantly higher among the recent cases. Among recent cases, a post-mortem elapsed time of more than 3 days occurred more often in group A than group B ($p = 0.0002$). None of the older cases had an unknown cause of death in either group. However, among the recent cases from both groups, 20–30% of cases resulted in unknown causes of death. The incidences of unknown causes of death were significantly higher among the recent cases in both groups ($p = 0.015$) and in group B alone ($p = 0.037$). The incidences of murder cases were significantly lower in group B among the recent cases ($p = 0.0022$).

Discussion: Elderly people who live alone are not easily found or aided when in critical situations, and they may only be discovered after death. Prolongation of the postmortem interval (PMI) results in the deterioration of the corpse making determination of cause of death problematic. The results of this study suggest that there are three factors that isolate elderly people and increase the difficulty in determining their cause of death: reduced communication with family members, reduced communication with neighbors or the community, and the increasing prevalence of the nuclear family. In group B, the prolonged discovery time and the increased incidence of unknown causes of death suggest reduced communication with family members, even though the incidence of being found by a family member was higher than in group A. The murder rate was significantly lower in group B, which may suggest that cases of domestic murder were overlooked. Support for a safe life and peaceful ending for the elderly requires a system based on three factors: remote monitoring to ensure safety, the establishment of elderly groups providing mutual support, and increased visits from welfare workers. Understanding the circumstances of the elderly who die alone is beneficial to countries facing an aging society with weakened family or community structures, and who hope for better support for the elderly.

© 2015 The Chartered Society of Forensic Sciences. Published by Elsevier Ireland Ltd. All rights reserved.

1. Introduction

Recently, life expectancy is increasing more and more rapidly. In developed countries, the mortality rate at ages 80 years and older continues to fall after 1950, and especially after 1970 [1–8]. Japan has now become an aging society to an unprecedented degree, with the longest or second longest average life expectancy among member nations of the Organization for Economic Co-operation and Development

* Corresponding author at: Department of Forensic Medicine, Graduate School of Medical Science, Kyoto Prefectural University of Medicine, 465 Kajicho, Kamigyo, Kyoto 602-8566, Japan. Tel./fax: +81 75 251 5343

E-mail addresses: ikegaya@koto.kpu-m.ac.jp, ikegaya-tyk@umin.ac.jp (H. Ikegaya).

(OECD). According to the Vital Statics of Japan, life expectancy was 86.83 for females and 80.5 for males in 2014. It surpasses the age limit of 85 years old proposed by Fries in 1980 [9]. The elongation of life expectancy is because of trends in mortality, disease and disability rates in the elderly [10].

In most developed countries, low fertility and mortality rates cause the population to age [11]. In 2050, the age structure of the German population will be smaller and older than today [12]. The proportion of people aged 65 years and older will double to 19%, and the proportion of octogenarians, nonagenarians and centenarians will triple to 4.4% in 50 years [13]. A 2014 paper on the aging of society published by the Japanese Cabinet Office showed that in October 2010 and October 2013, 23.0% and 25.1% of the population were elderly, and that further increases in this proportion are expected over time. With the aging of society, various problems including the neglect and abuse of elderly home residents have been reported in various countries [1–5]. Furthermore, in Japan, in recent years the number of solitary deaths at home is increasing among the elderly.

In 2011, Kotsuji and Kobayashi [14] cited a case previously reported in the *Yomiuri Shimbun* newspaper in 1884, in which an old man who was living alone and uncared for was found dead after considerable time had passed. This report indicated that the term “solitary death” was used for the first time in newspapers in 1970. Cases of solitary death in temporary housing following the Great Hanshin-Awaji Earthquake in 1995 [15] have also been reported yearly. Kanawaku et al. investigated autopsy cases conducted by the Tokyo Medical Examiner's Office after solitary deaths in Tokyo's 23 wards from 1990 to 2010. Results at 5-year intervals showed a general increase in the number of solitary death cases regardless of sex, and an upward trend of the average age at death in every ward [16]. In an investigation of causes of solitary death, Fukukawa found that family members were ineffective in preventing solitary death, and that solitary death was an indicator of weak unity within a family [17].

The number of family members comprising the typical household has decreased in recent years. Some years ago, big family households, in which three or more generations lived together, were more prevalent. Subsequently, among households the proportion of “nuclear families”, comprised only of parents and their children, has increased. More recently there have been increases in the number of people living alone, as couples, or an elderly parent with a single son or daughter. In 1980, the percentage of extended family households in Japan was 50.1, and 15.3% in 2012. In contrast, the rate of households with a person living alone was 10.7% in 1980, and 23.3% in 2012. During the same period, the number of young people who did not get married has increased sharply. The percentage of households with an elderly parent and their son or daughter was 10.5 in 1980, and 19.5% in 2012. Thus, the home environments in which the elderly live have changed dramatically over the last several decades, and the ability of the family to take care of the elderly, who are socially vulnerable, has not necessarily increased. This has caused problems, including abuse of the elderly and the illegal collection of pensions after death, and administrative measures have been taken to prevent these problems.

To examine unnatural death among the elderly over the last 20 years, we investigated autopsy case reports and records of death. In Japan, a judicial or administrative autopsy may be conducted under certain circumstances. If a crime is suspected, a judicial autopsy is performed under the Criminal Procedure Code, but if a crime is not suspected, an administrative autopsy is performed under Article 8 of the Corpse Autopsy and Preservation Law. In this study, we compared unnatural deaths from 20 years ago with those in recent years, and examined the effects of the types of household in which the elderly were living.

2. Material and methods

This research was approved by the institutional review board. We investigated 297 autopsy reports and death certificates of persons

aged 65 years old or older in Kyoto Prefecture. In Kyoto Prefecture, judicial autopsies are widely conducted not only in cases of suspected crime but also in cases in which the cause of death is unknown. The current criteria for judicial autopsy are the same as 20 years ago. These cases included 45 autopsies that were performed between 1989 and 1993 (about 20 years ago) and 252 autopsies from 2009 to 2013 (recent years). Only autopsies for people who lived with their family, and people who lived alone were included. People who lived in a nursing facility or a hospital and homeless people were excluded. We also limited the cases to those persons who were found dead or in critical situations at home. To examine the effect of familial background, the subjects were grouped into those living alone (group A) and those living with their family (group B). We investigated the first finder, cause of death, and time elapsed from death to being found. This data was compared between cases from about 20 years ago and recent cases, and between subjects in groups A and B.

2.1. First finder

We defined the first finder as the first person who found an elderly person in an abnormal situation, i.e., a sudden deterioration in physical condition, cardiac arrest, or death. The first finder was classified as a family member or another person, including neighbors, owner of their house, policeman, or firefighter.

2.2. Elapsed time from death to being found

Cases were classified as those taken to hospital by ambulance, those cases found within 2 days of death, and the cases that were found after 3 or more days.

2.3. Cause of death

Cases were classified into natural death; suspected immediate death caused by external factors i.e., a traffic accident, fall, drowning, burn, injury by smoke or fire, suffocation, poisoning, suicide, murder, or an unclear external factor; and death due to an unknown factor.

A chi-square test was used to compare differences between the two groups. For variables with ≤ 5 data points, or pairs with ≤ 10 data points, Yates revision was used. P-values < 0.05 were considered significant. Statistical analysis was performed using StatMate version 4.01.

3. Results

The number and residential circumstances of the elderly in 1990 and 2010 in Kyoto Prefecture are shown in Table 1. Twenty-five years ago, the total population of the elderly was 327,429 (data from October 1, 1990) and more recently it has risen to 605,709 (data from October 1, 2010).

The number and rate of autopsy cases in groups A and B and during each period are shown in Table 2. The numbers of autopsies were 45 between 1989 and 1993 and 252 in 2009–2013. There were no significant differences in the proportions of the elderly living alone or with family between the two periods. The numbers and proportions of autopsy cases for subjects found at home and elsewhere in each group and period are shown in Table 3. There were no significant differences in these

Table 1

The number and residential circumstance of the elderly in 1990 and 2010 in Kyoto prefecture.

Residential circumstance	1990		2010	
	Number	%	Number	%
Living with family or in another institution	284,013	86.7	495,343	81.8
Living alone	43,416	13.3	110,366	18.2
Total	327,429	100.0	605,709	100.0

Download English Version:

<https://daneshyari.com/en/article/106881>

Download Persian Version:

<https://daneshyari.com/article/106881>

[Daneshyari.com](https://daneshyari.com)