



E17 An Analysis of Death at Long-Term Care Health Facilities in Japan

Alissa M. Shida, BA*, *Department of Legal Medicine, Osaka, Osaka 545-0052, JAPAN*

Learning Overview: After attending this presentation, attendees will understand the risk factors in nursing homes in Japan and how preventing these risks factors would help that society.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by reviewing the records of autopsy cases of nursing homes and helping the investigation that occurs in these facilities.

Japan's declining birth rate and aging population are severe, even when compared to the demographic situation in other developed countries. With the related explosion in the number of long-term care health facilities established to cope with increasing numbers of community-dwelling elderly, Japan is facing social issues concerning the recognition of unnatural deaths. Based on forensic autopsy cases at the Department of Legal Medicine, Osaka City University Medical School, the present study analyzed deaths at long-term care facilities from the perspective of social medicine.

The records of 26 autopsies performed between 2005 and 2015 at the Department of Legal Medicine, Osaka City University Medical School, Osaka, Japan, of deaths at long-term care health facilities were investigated regarding characteristics such as age, sex, time of death, type of long-term care facility, number of nursing care staff, state of care, cause of death (internal and external causes), medical history, and autopsy findings.

A total of 26 (1.2%) of the 2,211 autopsies performed at the Department of Legal Medicine, Osaka City University Medical School between 2005 and 2015 were of deaths at nursing homes, ranging from approximately two to four cases per year. Women and individuals in their 80s represented 65% ($n=17$) and 46% of cases, respectively. By facility type, most cases were from special nursing homes for the elderly (publicly operated facilities that provide nursing and custodial care services to elderly people requiring everyday care (65%; $n=17$), followed by private residential care homes (privately operated homes for the elderly that provide nursing care services to relatively self-reliant elderly people;) (34%; $n=9$). There was also one case each from an intermediate care facility (facilities aimed at helping residents ≥ 65 years old to return home) and a private nursing care home (privately operated residential facilities with 24-hour staffing for elderly people requiring nursing care).

For both internal and external causes, more deaths occurred at night (69%; $n=18$) due to lack of staff compared to daytime (two staff). Causes of death were external in 15 cases and internal in 11 cases. After internal causes, the most common causes of death were blunt force trauma followed by drowning, asphyxia, and fire. The most common internal causes of death were cardiovascular disease (46%), pneumonia (18%), and malnutrition (18%). Known illnesses diagnosed before death included hypertension (34%; $n=9$), dementia (30%; $n=8$), cerebral infarction (23%; $n=6$), and diabetes mellitus (11%; $n=3$). Conversely, central nervous system diseases (46%; $n=12$), circulatory conditions (42%; $n=11$), and digestive system disorders (42%; $n=11$) were only identified during autopsy. The predominant cause of blunt force trauma was falling, which is the most common external cause of death (60%; $n=9$). Among these cases, 56% ($n=5$) were to the head. Suspected negligence was involved in three cases of bathtub drowning, three cases of wheelchair falls, two accidents during assistance with activities such as changing clothes, and one case of aspiration and asphyxia while eating. Of these nine cases of suspected negligence, 78% ($n=7$) occurred when staff was not in attendance. The present findings suggest that with the increasing establishment of long-term care facilities in response to the declining birth rate and aging population, systems of facility staffing and medical treatment by professionals such as doctors and nurses should be verified.

Legal, Health Care, Aging Population