

[Background]

- Drivers with dementia pose a threat to public safety as well as a threat to a loss of independence
- Because the majority of patients with dementia are not informed of their diagnosis in Japan, driving cessation at early stage of dementia is difficult
- Cognitive test became mandatory when elderly renew their license in Japan, in June, 2009
- Driving cessation affects residents in rural areas much more than in urban areas in terms of transportation.

[Purpose]

- 1) To describe the process of driving cessation in drivers with early stage dementia
- 2) To discuss how to assist the drivers and their families

(Method)

- Participants: 13 pairs of drivers with early stage dementia and their families, who consulted a psychiatric department at A university hospital, were advised to stop driving
- Study period: From Oct. 2003 to Feb. 2008
- Data collection

a. medical records, diagnosis, date of driving cessation advise and its contents b. semi-structured interview (2 hours)

living environments, driving history, purpose and frequency of driving response to driving cessation advise, and family members' interpretation of the problem and their coping strategies

c. records of consultation to the family (interviews, phone calls, e-mails)

Data analysis by four researchers

to describe the process of driving cessation and to analyse the factors associated with the difficulties in driving cessation

(Ethical considerations)

- ■Written informed consent was obtained after the primary physician orally explained the research protocol with written research protocol
- Those with informed consent were consulted until drivers successfully stop driving 3

[Characteristics of the participants]

Sex: 11 men, 2 women

Mean age: 71.3 (range:49-90 years old)

Type of dementia : Alzheimer 's type (AD) 9 Frontotemporal (FTD) 4 Clinical Dementia Rating : 0.5 (very mild) 9 1 (mild) 4

Mini-Mental State Examination score (mean) $19.3 (\pm 5.5)/30$

Primary caregivers: 11 spouses, 2 others Residence: rural 10, semi urban 3

[Results]

[Traffic accidents during the study period]

Age range of those who experienced traffic accidents (n=9) 68-92 years
Age range of those who did not experience traffic accidents(n=4) 51-72 years

All the drivers >= 75 years old had traffic accidents after being diagnosed with dementia

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Process of driving cessation and responses of the drivers and their families Deciding Coping with Watching over driving cessation when to stop Becoming aware of the Heightened conflict Giving up driving and changes and looking for between within the adaptation to the life solutions family, actively seeking without the car solutions ■To keep looking for the Declining driving ability Problems arise (slow responses to (traffic accidents, getting lost while driving) ■To talk about the car brakes and steering wheel, Heightened desire for a failure to obey traffic lights. repeatedly failure to keep the distance ■To ride a bicycle or to between the car) ■Anger, violence toward ask the family member to give him/her a ride ■Frustration family members ■Noticed the dangerous ■To ask him/her to stop ■To ask relatives or neighbour to give driving driving ■Torn between the desire ■Conflicts within the him/her a ride to keep him/her driving family members ■To seek information and the wish for driving ■Increased stress, health regarding local cessation problems resources

Neighbours' response and effective coping strategies by the family /			
Z	Watching over	Deciding when to stop	Coping with driving cessation
Neighbour	■Noticed the dangerous driving ■To monitor and exchange information	■Complaints from neighbour ■To ask caregivers or families living with the drivers to do something	■To offer the participate a ride for outing ■To utilize public service
Effective coping by the family	■To limit driving (To limit the area to drive, to avoid drive, to avoid driving in a rainy day and at night, to switch driving in the city and parking in the garage) ■To monitor driving skills while riding with the participant ■To consult with the other relatives	■To consult with the police, driver's licensing agency, and health care professionals ■To persuade the driver to stop driving ■To seek help from male relatives and friends ■To obtain physician's official recommendation for driving cessation ■To interact with the former drivers with same experience	■To have a farewell party for the car and to notify neighbour about driving cessation ■To have empathy for the participant and to listen to him/her ■To assist the participant to find something to live for ■To utilize day-service to fulfill desire to go out

[Conclusions]

- Driving cessation for early stage dementia takes many months while some experience traffic accident. Disabling factors for young age, transportation needs, and difficulty in obtaining alternative transportation.
- Advising driving cessation by the physician shortly after the diagnosis of dementia is recommended so that effective supports could be offered to make the family understand the dementia and strengthen coping ability for successful driving cessation.
- In an aging society, identifying drivers with dementia at early stage is important so that coaching or counseling could be offered to meet family's need and to explore alternative transport. These supports could assist drivers with dementia to adopt life without a car.

[Factors associated with driving cessation]

Mean duration between the diagnosis of dementia and driving cessation: 2.5 years (Range: 0.1 - 6.7 years)

Dementia type:

Drivers with FTD tend to have more difficulty in giving up driving than drivers with AD. It sometimes required to place them in long-term care for driving cessation.

Disabling factors:

Severity of dementia, Onset of dementia at young age, Transportation needs (agriculture, small business), Care-burden felt by the caregivers, Lack of alternative drivers in the family, Difficulty in obtaining alternative transportation

Successful cases (no traficc accident)

- * Those who physician advised driving cessation shortly after the diagnosis of dementia, received monthly counseling and family supportby the nurse
- * Those who nurses did coaching strengthened coping ability and learned to utilize resources were able to adopt life without the car and and to live with their families until dementia progress