



## Pathology Biology Section - 2012

### G121 Medical Problems and Medical Neglect in the Elderly

*Lakshmanan Sathyavagiswaran, MD\*, and Christopher B. Rogers, MD, Los Angeles County, Medical Examiner's Office, 1104 N Mission Road, Los Angeles, CA 90033*

After attending this presentation, attendees will understand problems encountered in nursing homes, a variety of medical problems found in the elderly, and risk factors for elder abuse.

This presentation will impact the forensic science community by increasing awareness of special circumstances often found in the elderly. It will raise awareness among forensic professionals of abuse of elderly individuals.

Approximately 1.5 million Americans or 6% of the population over 65 live in one of the 18,000 nursing homes in the United States. Seventy-two percent of the nursing home population is over the age of 75. By the year 2040 it is estimated that there will be 5.2 million nursing home residents, of whom 88% will be over 75. Currently 33% of nursing home residents expire there. The median length of stay of the elderly in the nursing homes is about 582 days and about 26% of the residents stay less than six months. Half of nursing home residents are demented and other half are incontinent.

Problems in nursing homes include malnutrition, falls, excessive drug use, decubiti, infection, and psychological problems including depression, dementia, late life paranoia, and behavioral problems. Iatrogenic disorders include inappropriate drug use and use of too high a dose of a drug or too many drugs. The prevalence of mental illness in nursing home patients is approximately 75%. Nearly 40% of residents have occult depression and may benefit from a low dose of antidepressant drug. Behavioral problems include passive and active aggression, verbal aggression, and manipulative behavior. About 1.5 million infections occurred annually in nursing homes and 27% of all hospitalizations in nursing home patients are due to infections. Influenza in nursing home settings has a case fatality rate of approximately 10%. It has been found that failure of the protective effect from influenza vaccination is probably related to impaired responses from poor nutritional status in nursing home residents. Similar questions also exist regarding the efficacy of pneumococcal vaccination in the frail elderly. Tuberculosis epidemics can occur in nursing homes.

Malnutrition has been found to be present in just under 60% of nursing home patients and weight loss is a major problem in the nursing home. Zinc deficiency has been important in the pathogenesis of decubiti, immune dysfunction and anorexia in the nursing home residents. Somatomedin is also low in this setting. Growth hormone deficiency is associated with increased adipose tissue and reductions in muscle mass, bone mass, renal blood flow, and liver drug metabolism. Dehydration is another major problem. There is decreased thirst perception with advancing age. Many nursing home patients live in a water desert. Hyponatremia may be due to tube feedings, low salt diet, or syndrome of inappropriate antidiuretic hormone secretion. Elderly institutionalized patients, 10 – 25% will have a major fall each year. Usually the falls are associated with use of antidepressants, sedatives, hypnotics, vasodilators, osteoarthritis, and depression. The risk of falls is increased after a meal.

It is estimated that half a million elders living with younger family members are abused. Some old people become ill, demanding, less productive and more difficult to care for as they age. They become stubborn, quarrelsome, and untidy, refusing to eat and losing high order psychological defense mechanisms acquired during developmental phases. They may even become aggressive and combative, so they provoke aggression and punishment from the caretaker. With the demise of an extended family, many working children find it difficult to care for aged parents both physically and financially. In modern society such care is expensive and exhausting.

The temptation to punish an elder who acts like a mischievous child may be severe. It has been found that if a child has been abused, he may later become an abusive caretaker. New conflicts arise when aged parents move into a child's household leading to violence if they are not resolved. Differences in life style, values, and religious practices may be some of the unresolved family conflicts which may be reactivated. The caretaker becomes depressed, despairing at the hopelessness of the situation.

Neglect by paid caretakers arises because of poor pay of aides, poor working conditions, long working hours, and interference of red tape and paperwork with efficient care. Staff members may become depressed and pessimistic because they believe that their patients are dying and there is no hope of successful outcome no matter what the efforts. In for-profit nursing homes, there may be proprietary efforts to cut cost, and show better profit to management and stock holders. This may result in neglect, for example, by providing less food, poorer quality of food, fewer personnel, and less maintenance of facilities.

Many elderly patients don't complain because of fear of retaliation, including possible expulsion to homes that are worse or further away from families, physical abuse, or ignorance of their rights, and legal recourse. They may become apathetic and feel defeated, depressed, and helpless. Impending death enhances these feelings. Case examples of medical neglect involving dehydration, severe fecal impaction, and vitamin deficiency will be presented.

#### **Nursing Home, Elder Abuse, Geriatrics**