

## Spasticity in advanced dementia patients increases the risk for pressure ulcer

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## Abstract

**Introduction**: Pressure ulcers, spasticity and advanced dementia are frequently common among immobile elderly patients treated in skilled nursing departments. Spasticity and advanced dementia are contributing factors leading to severe functional disabilities, pain, sleep disorders and can lead to complications such as muscle contractures and pressure ulcers.

**Objective**: To identify and characterize the association relationship among prevalence of pressure ulcers, spasticity levels and advanced dementia in disable elderly patients hospitalized in skilled nursing departments. Early indications between these factors could promote clinical monitoring of pressure ulcer onset along with preventive treatment interventions.

**Method**: The design was retrospective and cross sectional. The study allocated data from the medical files of elderly-immobile hospitalized patients, median age 73.5. All were bedbound and suffering from at least one advanced chronic disease, advanced dementia and high-grade pressure ulcers. An occupational therapist examined the spasticity levels of all patients according to the Modifies Ashworth Scale.

**Results**: Forty patients were included in the study's: 23(57.5%) were with pressure ulcers. Independent factors (gender, polypharmacy, head injury, level of consciousness, dementia and spasticity) were compared between the two groups with pressure ulcers and without. Logistic regression indicated that only dementia and spasticity were significantly associated with development of pressure ulcers versus those without dementia or without spasticity (OR: 4.222, 95% CI: 1.002-17.796; P=0.05), (OR: 8.640, 95% CI: 2.050-36.423; P=0.003) consequently. Patients with advanced dementia were significantly higher prevalence of severe spasticity. In a multivariate logistic regression analyses, only spasticity was significantly associated with pressure ulcers, (Adjusted Odds Ratio = 8.175, 95% CI= 1.608-41.551; p<0.05).

**Conclusion**: The current findings support significant association among the prevalence of pressure ulcers, spasticity, and advanced dementia, highlighting spasticity as the most significant factor contribute to the development of pressure ulcers. The strong association of spasticity with the onset of pressure ulcers should encourage clinicians to systematically examine spasticity in this population in order to implement preventative measures and delay the onset of pressure ulcers. Spasticity is significantly prevalent in advanced dementia patients versus non-demented patients, emphasizing increased susceptibility to pressure ulcers onset during the rapid progression of dementia in immobile bedridden patients.

## Biography

Efraim Jaul, a specialist in geriatrics and family medicine, certified by the Hebrew University of Public Health. He is senior lecturer at the school of medicine, The Hebrew University of Jerusalem. Efraim Jaul academic activity (teaching and research) focuses on pressure ulcers in the elderly person. He has Published about 50 articles in the medical press in Israel and abroad. Also, published 5 books dealing with old age: published by Eshel-JDC, "The Nursing Beard" 2004, the stages of functional decline, coping and treatment; "Stories Told My Patients" 2014, dealing with physical-mental and social situations in old age; "The Medical Guide for the Elderly Traveler", academon publishing, 2002; "The Older Man in the Affair" 2011; "Aspects of health and old age are clearly valuable tools for the Torah" 2015. Has worked at Herzog Medical Center since 1991.

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