

LETTER TO THE EDITOR

FETAL POSITION IN ALZHEIMER'S DISEASE. AN ANATOMIC BODY REMODELLING DUE TO RETROGENESIS

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ABSTRACT

Acquired fetal position by patients in end stage Alzheimer's disease is a quite common sign. The theory of retrogenesis was proposed to explain this anatomic remodelling of the human body.

Keywords: fetal position, Alzheimer's disease, degenerative mechanisms, anatomic remodelling, retrogenesis.

RÉSUMÉ

Position foetale dans la maladie d'Alzheimer. Un remodelage anatomic du corps dû à la rétrogénie

La position foetale acquise par les patients en phase terminale de la maladie d'Alzheimer est un signe assez commun. La théorie de la rétrogénie a été proposée pour expliquer ce remodelage anatomic du corps humain.

Mots-clés: position foetale, maladie d'Alzheimer, mécanismes dégénératifs, remodelage anatomic, rétrogénie.

Dear Editor,

Is fetal position in Alzheimer's disease a result of extensive muscle contraction, or a complete body and brain shutdown? Scientific community still tries to unveil the very nature of Alzheimer's disease (AD) which is hidden in the mist of a blurred brain function. During the late stages of the disease, patients manifest a cluster of symptoms like increase

in emotional needs, fears and anxieties, combined with an anatomic remodelling of their entire body and biomechanical shutdown. Weight loss, both fat and muscle deterioration, strength decrease and inability for the trunk to be self supported fill in an image which looks exactly like the fetal position¹. Although some may think that a complete physiological shutdown is in place, retrogenesis was introduced as a theory to demonstrate how individuals suffering

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Figure 1. Male patient, 87 years of age, end stage dementia (2 years in end stage) acquired a fetal position, image under care givers consent. Cadaveric specimen, embryo, 20 weeks, 272 gr, Arvatitis collection, University of Thessaly (in the circle).

from AD loose their cognitive skills and abilities in reverse order in which they learned or acquired them, while simultaneously musculature system and brain, despite its lesions, still working but shifting towards a prenatal age stage. Degenerative mechanisms in AD inversely recapitulate the processes of the normal neurodevelopment, as developmental reflexes reappear in such patients (suffering from AD), emerging at a point which might be anticipated from the corresponding developmental age². Furthermore, paratonia is suggested to be, to some extent, a return of an infantile stabilization reflex mechanism which may parallel the great decline in motor performance. Patients acquire a form of hypertonia, an inability to relax muscles during muscle tone assessment with an involuntary variable resistance during passive movement³. At the end stages, progressively, all become bedridden, curl up and lying in an increasingly fetal alike position. This is due to muscle contraction, while the head and shoulders are shifting forwards, the chest cage curls inwards and the spine crunches

and shifts from the normal S-curve posture to a C-position (Figure 1)^{1,2}. The continuous aging of the population on a global scale alongside with such a high prevalence among the population manifesting signs of resisted movement and retrogenesis in AD, demonstrate the necessity for the practitioners who deal with general public health, geriatrics and neurology to have a good working knowledge of this common neurological sign.

REFERENCES

1. Groulx B. Assessment and approach of patients with severe dementia. *The Canadian Review of Alzheimer's Disease and Other Dementias*. 2006;8(3):10-13.
2. Reisberg B, Franssen EH, Souren LE, et al. Evidence and mechanisms of retrogenesis in Alzheimer's and other dementias: management and treatment import. *Am J Alzheimers Dis Other Demen*. 2002;17(4):202-212.
3. Pauc R, Young A. Paratonia and gegenhalten in childhood and senescence. *Clin Chiropr*. 2012;15(1):31-34.