

Assessment of Nocturia in Elderly People Using Non-wearable Actigraphy

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[AIMS OF STUDY]

Some elderly people who living in nursing homes have frequent nocturne urination. Some on them walk on their own and go to the bathroom multiple in the middle of night. Nocturia tends to reduce sleep quality in elderly people. Decreasing sleep quality can also lead to falls in elderly people. Elderly people often don't want staff to refrain from doing privacy and don't want to be intervened in privacy, so their condition of nocturne is often not visualized until their fall. If nocturia is revealed, elderly people can receive the support of urologists.

Recently, the use of digital technology has been progressing in nursing homes. Non-wearable actigraphy is also used as a digital technology. Inherently, non-wearable actigraphy is used to visualize sleep situations. By analysing the sleep diary created by non-wearable actigraphy, it is likely that elderly people who are suffering frequent nocturia can notice. The purpose of this study was to verify the effectiveness of non-wearable actigraphy as an assessment of nocturia. Paramount Bed Sleep Scan was used a non-wearable actigraphy.

[METHODS]

The study was single-arm, open-label, and conducted at a nursing home. With the consent of elderly people, a non-wearable actigraphy was set under the mattresses of the beds of five elderly people who walked on their own and went to the bathrooms in the middle of the night. Non-wearable actigraphy makes sleep diary for two weeks. We analyse those sleep diaries with nurses and care workers to see how many times they have been to the bathroom in the middle of the night. For elderly people who may have nocturia, the urine volume per session is measured using an excretion measuring cup with the consent of individuals.

[COI DISCLOSURE]

Presenters: There are no companies or entities with which the presenters have a conflict of interest (COI) that should be disclosed in relation to the presentation topic.

[RESULTS]

Of the five, two elderly people only went to the bathroom once or twice in the middle of the night. Three elderly people went to the bathroom about eight times a night. After that, the urine volume was measured, but only about 30cc to 50cc were urinated per session. Of the three, one was male and two were female. One of the three members, with the help of her family, led to the diagnosis of the urologist. The urologist diagnosed her with a urinary tract infection. The urologist advised nurses and care workers at the nursing home to increase her dairy drinking volume. The other two were unable to see a urologist due to the wishes of the individual and their family.



Figure1 Sleeping Diary

[INTERPRETATION OF RESULTS]

Of the five elderly people, three were confirmed to have nocturne frequent urination. When it comes to nighttime urination in elderly people who can walk alone, it is often not confirmed how many times they have been to the bathroom. Therefore, even if treatment can improve, there is a possibility that nocturia is left unattended until fall. There are probably many elderly people living in nursing homes in this state.

[CONCLUDING MESSAGE]

Non-wearable actigraphy, originally used to determine whether sleep disorders, has been found to be useful in assessments of elderly people who may have nocturia. The use of non-wearable actigraphy is simply set under the mattresses on the beds, so the psychological burden on use is reduced and it is easy to utilize.