

Comparison of Patient Preference for Two Insulin Injection Pen Devices in Relation to Patient Dexterity Skills

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Abstract

Background:

Impaired dexterity has been reported to be prevalent in diabetes patients independent from the existence of diabetic neuropathy. This study was performed to investigate the impact of dexterity impairment on patient preference for two insulin pen injection devices (InnoLet and FlexTouch).

Methods:

Ninety patients [54 male/36 female; age (mean \pm standard deviation), 62 ± 8 years; disease duration, 18 ± 11 years; hemoglobin A1c, $7.2 \pm 1.0\%$] were included in this investigation and were stratified into four different groups based on the results of a dexterity test (Jebsen–Taylor Hand Function Test) and assessment of visual impairment: 15 type 1 (group A) and 30 type 2 (group B) patients with impaired dexterity, 30 type 1/type 2 patients with visual impairment (group C), and 15 type 1/type 2 patients without any impairment (group D). The patients performed a cognitive function test (number connection test), were introduced to the devices in random order, and were asked to perform some mock injections before completing a six-item standardized preference questionnaire.

Results:

There was a strong preference for FlexTouch in all groups. All unimpaired patients (100%, group D) preferred FlexTouch, as did the vast majority in all other groups. Only 11% of the patients with impaired cognitive function preferred InnoLet, as did a few patients with more severely impaired dexterity or with visual impairment (group A, 13%; group B, 3%; group C, 14%).

Conclusions:

Patient dexterity skills may have an influence on device preference, especially if the impairment is more pronounced.

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Abbreviations: (JHFT) Jebsen–Taylor Hand Function Test, (T1DM) type 1 diabetes mellitus, (T2DM) type 2 diabetes mellitus

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