Algorithmic Bio-Equivalency

A Method to Determine Methadone Dose in

Methadone Maintenance Treatment

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Abstract

Methadone maintenance treatment is a known approach; however it has some obvious weaknesses. The patients are agitated in the necessary time to repress deprivation symptoms. In the beginning of treatment feeling of voraciousness of abusing is the source of dissatisfaction and possible lapse of patients. The prescribed dose of methadone is very different for patients with the same amount of substance consumption in different centers, too.

In this study a new method is presented named as "***Algorithmic Bio-Equivalency***" (ABE) which includes a ***table*** to determine the methadone dose and a ***model*** to methadone dose change-slope which not only is accompanied by low risk and patients' satisfaction, but also can lead to coordination of methadone prescription for patients with the same addiction intensity in different centers.

Out of the 154 total patients studied in three therapeutic centers in Tehran, 85 were under surveillance for six months. 17 patients received the medicine through the usual conservative method and 68 patients received it using the new method in which every patient received a specific amount of methadone which its Bio-Equivalent Dose was equal to his/her average amount of substance abuse during 24 hours, based on the tables. The best changing-slope of methadone dose was applied. The findings were measured and compared together in ***four axes***; "abuse voraciousness-lapse", "deprivation symptoms", "overdose symptoms" and "general satisfaction with treatment" which showed a meaningful improvement of treatment quality and effectiveness of this method in comparison with the conservative country protocol.

This was an Interventional Controlled Trials without Randomization Study; the weakness of this study was choosing patients to be included in two groups of "high risk-dependent" and "low risk-independent" which was used to decrease the risks of study, but some concepts such as "***Equivalent Basic Dose***", "***Loading Dose***", "***Peak Dose***" and Specific Assessment Model were well determined to change methadone prescription dose.