Analysis of the Consumption Trends of Narcotic Appetite Suppressants following DRTNV upon NIMS Big Data

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Introduction: The Ministry of Food and Drug Safety of South Korea has established Safe Utilization Standards to prevent dependence of narcotics. They are also monitoring doctors who violate the standards by sending out an advance notice letter using NIMS (Narcotics Information Management System) big data. The purpose of this study is to analyze the impact of consumption of narcotic appetite suppressants following the implementation of DRTNV (Digitalized Real-Time Narcotics Vigilance) in South Korea.

Methods: The data were sourced from the NIMS big data, covering the three-year period from 2021 to 2023. Interrupted Time Series analysis was used in the analysis of changes in the consumption of narcotic appetite suppressant following DRTNV.

Results: The consumption of narcotic appetite suppressants had continuing downward trends since 2021. As a result of Interrupted Time Series analysis of the consumption according to DRTNV, it was confirmed that the immediate effect on consumption decrease was significant during the establishment of the Safe Utilization Standards in 2022 and DRTNV in 2023 (p-value < 0.05). Notably, there was a statistically significant reduction among high-risk groups including adolescents (p-value < 0.05).

Discussions and Conclusions: DRTNV raises social awareness of doctors and patients regarding dependence of narcotics and is associated with an immediate reduction in the consumption of narcotic appetite suppressants. While these findings suggest a beneficial trend, further studies are needed to establish causality.

Implications for Practice or Policy: After using the NIMS big data to determine the overall consumption trends of narcotic appetite suppressants in South Korea and confirming the effects of government policies such as DRTNV and Safe Utilization Standards to prevent dependence of narcotics. The results of this study suggests a potential association with reduced dependence of narcotics.

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