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Comparison of Cardiovascular Risks following Smoking Cessation Treatments Using Varenicline vs. NRT among Schizophrenic Smokers

Background: Schizophrenic patients have a lot higher smoking rates when compared to people in the general population. A variety of pharmaceutical cessation aids are available, which include nicotine replacement therapy (NRT), Bupropion SR, and Varenicline. Our objective was to assess which cessation medication would have lower risks in developing risk factors of cardiovascular diseases.

Methods: A population-based retrospective cohort study was conducted using the General Electric (GE) electronic medical record database (1995-2011). The cohort consisted of patients with a diagnosis of schizophrenia or schizoaffective disorder (ICD-9 code 295.00-295.99) and who had newly initiated use of any smoking cessation medication. We excluded our cohort who (1) were not prescribed atypical antipsychotics and (2) already had diagnosis of diabetes, hyperlipidemia or hypertension prior to index date. Follow up period was from 12 weeks onwards index date up to one year. The hazard ratio of developing cardiovascular risks was assessed using Cox proportional hazards regression model after controlling for other covariates.

Results: A total of 580 patients were included in our cohort. Among those, nearly half (n=276, 47.59%) developed one or more criteria of the metabolic syndromes. We found that smokers who were prescribed NRT were less likely to develop metabolic syndromes as compared to those who were prescribed Varenicline.

Conclusions: Physicians are advised to carefully weigh the risks against the benefits before prescribing cessation medications since risks for metabolic syndromes were found to be very high. Healthcare providers should monitor patients' lab data regularly as this minority population is under higher risks.