

Varenicline versus nicotine replacement therapy for long-term smoking cessation: an observational study using the Clinical Practice Research Datalink

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Plain English summary

Varenicline vs. nicotine replacement therapy for smoking cessation

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Plain English summary

Smoking is the number one avoidable cause of ill health and death. Experiments suggest that more smokers will quit after being given the drug varenicline than with any other smoking cessation treatment. However, most of the experiments used to license varenicline had a relatively short follow-up (< 1 year) and did not necessarily recruit participants who were representative of smokers seen in a general practice in the UK, who tend to be older, are sicker and more likely to have neuropsychiatric illnesses.

In this study, we investigated the outcomes of 287,079 patients prescribed varenicline or nicotine replacement therapy (e.g. nicotine patches and gum). We followed each patient for up to 4 years after they received their prescriptions and matched their data to information on deaths from the Office for National Statistics and hospital admissions. We investigated how often these patients subsequently attended their general practitioner, and how often they received a diagnosis of myocardial infarction, chronic obstructive pulmonary disease, depression or anxiety in primary care.

We found that patients who were prescribed varenicline were much more likely to quit smoking up to 4 years after they received treatment and subsequently attended their general practitioner less frequently. These findings were robust across the three different analysis methods we used. We also found that patients prescribed varenicline were much less likely to be ill or to die than those prescribed nicotine replacement therapy. However, these results may be because the patients who were prescribed varenicline were much healthier before they received the prescription. Therefore, these differences in health are unlikely to be caused by taking varenicline or quitting smoking.

In conclusion, varenicline helped patients quit smoking, but there was little causal evidence that prescribing patients varenicline causally reduced rates of mortality or morbidity compared with prescribing nicotine replacement therapy.

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