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ORIGINAL RESEARCH

Trends in prescription claims following the withdrawal of rofecoxib from the Canadian market

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ABSTRACT

Objective: Rofecoxib (Vioxx, MK996) was voluntarily removed from the Canadian market by Merck in September 2004. No studies have examined the impact of its removal on utilization of other NSAIDs. We examined the utilization (i.e., numbers of claims) of NSAIDs, proton pump inhibitors (PPIs) and salicylic acid derivatives (SADs) in Ontario and Québec one year prior to and after rofecoxib's withdrawal from the Canadian market. **Methods:** Monthly claims of coxibs occurring between October 2003 and November 2005 were obtained from Brogan Inc. NSAIDs were analyzed as a group and by chemical class. Interrupted time series (segmented regression) was used to examine changes in utilization of other coxibs, COX-1 NSAIDs, PPIs and SADs after rofecoxib's removal. **Results:** Segmented regression analysis revealed that the monthly number of claims for all NSAIDs (including coxibs) decreased by 19%, from 622,347 to 500,397 between October 2003 and November 2005. We also identified a marked reduction for all NSAIDs between September 2004 and January 2005 (-141,524 claims/month; 95%CI -188,889 to -94,159; P <0.001). Monthly coxibs claims decreased after rofecoxib's withdrawal (-156,883 claims/month; 95%CI= -184,393 to -129,373; P <0.001). Non-selective COX-1 inhibitors exhibited the opposite trend; monthly claims increased 32% to 414,813 at study end. No shift in utilization of PPIs or SADs was observed. **Conclusions:** The removal of rofecoxib from the Ontario and Québec markets resulted in an immediate decrease followed by a slow increase in all NSAID claims.

Key words

Claims analysis; Drug utilization; Linear models; Non-steroidal anti-inflammatory agents; Regression analysis

RÉSUMÉ

Objectif: Le rofecoxib (Vioxx, MK 996) a été volontairement retiré par Merck du marché canadien en septembre 2004. Comme il n'y avait pas d'étude sur l'impact de l'utilisation des autres AINS, nous avons examiné l'utilisation (nombres de demandes) des AINS, des inhibiteurs de la pompe à proton (IPP) et des dérivés de l'acide acétylsalicylique (AAS) dans l'Ontario et le Québec l'année précédant et celle suivant le retrait du rofecoxib du marché canadien. **Méthodes:** La demande mensuelle des coxibs entre octobre 2003 et novembre 2005 a été obtenue de Brogan Inc. Les AINS ont été analysés en tant que groupe et d'après leur classe chimique. Les changements de l'utilisation des autres coxibs, des inhibiteurs de la COX-1, des IPPs et des dérivés de l'AAS ont été analysés au moyen de séries interrompues dans le temps (analyse de régression segmentée). **Résultats:** L'analyse de régression segmentée a montré que le nombre mensuel de demandes des AINS (incluant les coxibs) a diminué de 19 %, de 622,347 à 500,397, entre octobre 2003 et novembre 2005. La demande de tous les AINS a également diminué significativement entre septembre 2004 et janvier 2005 (-141,524 demandes/mois; 95% CI -188,889 - 94,159; P <0,001). La demande mensuelle des coxibs a diminué après retrait du marché du rofecoxib (-156,883 demandes/mois; 95% CI -184,393 - -129,373; P <0,001). Les inhibiteurs non-sélectifs de la COX-1 ont montré une tendance en sens opposé: les

