DSEN ABSTRACT

Exposure to valsartan products with nitrosamine impurities in the US, Canada, and Denmark

A study conducted by the Canadian Network for Observational Drug Effect Studies (CNODES)

Summary

- Our findings suggest that many patients received valsartan products with nitrosamine impurities between 2012 and 2018, prior to knowledge of the impurities.
- The average duration of recalled valsartan use in Canada was about 9 months (versus about 6 months in the US).

Key messages

- Despite widespread use of valsartan products with nitrosamine impurities, the average duration of exposure was short and is unlikely to pose an increased risk of cancer.

Project Lead & Team

- Michael Paterson, MSc and Robert Platt, PhD
- Team members available here

Link to publication

- Under journal review

What is the issue?

- In July 2018, a mass recall of valsartan products containing nitrosamine impurities prompted investigations into the etiology and level of impurities and potential risks for cancer.
- Risk of cancer associated with nitrosamine exposure depends upon a combination of dosage and duration of exposure. Data are limited regarding the number of patients exposed to valsartan products contaminated with nitrosamine impurities or the duration of exposure.

What was the aim of the study?

- To quantify the extent and duration of exposure to valsartan products contaminated with nitrosamine impurities and to estimate the potential risk for cancer based on duration of use in the US, Canada, and Denmark.

How was the study conducted?

- In collaboration with the Food and Drug Administration (FDA), this retrospective cohort study was conducted using data from 3 countries: Canada (CNODES), US (FDA's Sentinel System), and Denmark (Danish National Prescription Registry).
- The study cohorts comprised patients aged 18 years and older who received a prescription for valsartan between May 2012 and December 2020.
- Exposure was defined based upon the nitrosamine impurity status of each product: recalled generic products with confirmed contamination (recalled-tested); recalled generic products not tested (recalled); non-recalled generic products; and non-recalled branded products.
- The percentage of valsartan exposure episodes according to impurity status, rates of switching, and duration of use were estimated.

What did the study find?

- We identified 3.3 and 2.8 million recalled-tested and recalled valsartan exposures, respectively, in the US; and 51.3 and 229 thousand exposures, respectively, in Canada. Exposure levels in Denmark were lower.
- Following the July 2018 valsartan recalls, utilization of affected valsartan products sharply declined and rates of switching to non-valsartan ARBs increased.
- The mean duration of use of recalled-tested products was 167 days in the US and 146 days in Canada. For the recalled products, the mean duration of use was 178, 269, and 166 days in US, Canada, and Denmark, respectively.
- Despite the widespread use of valsartan, the average duration of exposure to recalled products was short and is unlikely to pose an increased risk for cancer.

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CIHR IRSC Canadian Institutes of Health Research / Instituts de recherche en santé du Canada

CNODES CANADIAN NETWORK FOR OBSERVATIONAL DRUG EFFECT STUDIES

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