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Contrary to experts' warnings, common antibiotics are not linked to a higher risk of internal bleeding

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Abstract

Background: Poorly designed research studies previously found that common antibiotics, called fluoroquinolones, that used to treat tricky infections, may increase the risk of internal bleeding. Medicine regulators around the world responded quickly to these studies by recommending that doctors limit prescribing of these antibiotics. However, researchers across the world were aware of the limitations of these prior studies and came together to design a study that would help to clarify this risk.

Design and Methods: We analysed data from millions of patients in healthcare databases from all over the world. We conducted a cohort study to determine whether people were more likely to go to hospital for internal bleeding withing 60 days of starting a fluoroquinolone antibiotic to treat urinary tract infection (UTI) compared to people who received other commonly used antibiotics. We used high quality, best practice methods to ensure that our results were not biased because those who received fluoroquinolones were sicker and more likely to go to hospital anyway compared to those who received other antibiotics. We collaborated widely with physicians, epidemiologists, pharmacists and the regulators to ensure that our results would be appropriately disseminated to key decision makers.

Results: Our study which included millions of people across the world in 14 different databases from 5 different countries showed that fluoroquinolone antibiotics are just as safe as other options for treating UTIs. This means that, even though the medicine regulators have warned about a potential risk of internal bleeding, patients can be reassured that their treatment is safe and effective, and doctors can safely prescribe these medicines to the patients who need them. We presented these results to various stakeholders, including the medicines regulators, at multiple large international meetings and have submitted our findings to a leading medical journal for wider dissemination to the clinical and scientific community.

Conclusions: This research clears up previous concerns about this risk which were based on poorly designed studies. We provide high-quality evidence that the risk of internal bleeding with these medicines is low and similar to other commonly used treatments. Doctors and patients can be assured that if required, fluoroquinolones can be used safely to treat severe infections.