Pharmacogenomics factors relating to Ibuprofen and Acute Kidney Injury in Paediatric patients: A Systematic Review

Abstract

Introduction: Ibuprofen is associated with acute kidney injury (AKI), but there is marked inter-individual variation, with the majority unaffected but some with severe damage.

Aim:The primary objective of this study was to establish if any previous studies have examined the potential pharmacogenomic associations between ibuprofen exposure and development of AKI in children using ibuprofen

Method: The search was initiated using search engines such as PubMed, Cinahl Plus and Cochrane, the key words and phrases were used, ‘Ibuprofen’, ‘Nephrotoxicity’ and ‘Pharmacogenomics.’ Advanced search, which allowed me to search multiple alternative key words, to ensure any available papers, were identified.

Results: There was no sufficient evidence to evaluate the pharmacogenomic factors relating to Ibuprofen and Acute Kidney Injury in Paediatric patients.

Conclusion: The search terms used were wide and inclusive, so we believe it unlikely any studies were missed. This is a promising area for future research, although care will be needed in study design to exclude the influence of factors such as pyrexia and dehydration in the children affected.