Prescribing in Acute Kidney Injury (AKI)

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Introduction and Aim

An automated detection and alert system for Acute Kidney Injury (AKI) was introduced in July 2012. Alert data showed patients with AKI had an odds ratio for mortality = 8.9 (95% confidence interval of 7.3 to 10.8) and that 36% of alert were from Emergency Department samples. A quality of care audit suggested that nephrotoxins were not being stopped or were slow to be stopped.

We wished to see if giving the pharmacists lists of who had AKI could impact on prescribing. In July 2013 we automated a pharmacists 'portal' that lists patients with AKI daily by ward location at 07:30 every day.

Methods

'Snapshot' (cross-sectional) audits were undertaken of patients who had triggered an AKI alert in that last 24hrs in May (pre-intervention) and in September (post-intervention). We used two 24hr periods in both months at least 1wk apart. The investigators reviewed the ward case notes, fluid chart, and drug charts to collect data on the risk profile, precipitating factors and quality of care.

Results

In May 62 patients were audited (series 1) and 75 patients in September (series 2). (CKD data for September pending.) In the May groups 53% were male and the median age was 77 (mean 73 years). In the September groups 46% were male and the median age was 76 (mean 73 years).

Discussion

Do AKI alerts help improve prescribing?

This study was about managing the prescribing risks for patients with AKI. The study was too small but did suggest AKI alert lists support pharmacists. A larger study would also allow review of outcomes according to prescribing. Teaching of other clinicians is a confounding factor but this was occurring before and after this intervention.

One limitation was that 36% of the AKI alerts result from ED samples and those patients relocate quickly such that the daily 07:30 lists (which give the location code that the blood was sent from rather than actual “live” location) are less helpful i.e. it currently works better for ward patients.

Conclusion

Good AKI care is challenging because it is a dynamic condition and these patients may require several medication adjustments. Therefore highlighting these patients to pharmacists ought to promote safety and this small study suggests so.

Future plans

We plan to update the lists more than daily (and location), do quarterly re-audits with support from the pharmacists on both sites and introduce an AKI nurse for patients with stage 2 AKI.