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# Prevalence of co-trimoxazole induced hyperkalemia in chronic and acute users in a tertiary teaching hospital.

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# PREVALENCE OF CO-TRIMOXAZOLE INDUCED HYPERKALEMIA IN CHRONIC AND ACUTE USERS IN A TERTIARY TEACHING HOSPITAL

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## Objective

- Primary: evaluate the risk of hyperkalemia in patients receiving cotrimoxazole.
- Secondary:
  - 1) detect the changes of potassium level from baseline to 7, 14, 21, and 30 days
  - 2) determine the association between cotrimoxazole dose and potassium level
  - 3) examine the relationship between renal function and hyperkalemia

## Method

- A retrospective observation study of all patients treated with cotrimoxazole during Jan 2012 till Jan 2013.
- Exclusion criteria include patients received less than 2 doses or have no lab test.
- Patient's medical records (both electronic and paper-based) were used to collect required data.
- Data analyzed using descriptive & inferential analyses.

Figure 1. Average of Potassium Level for QD & EOD over different duration

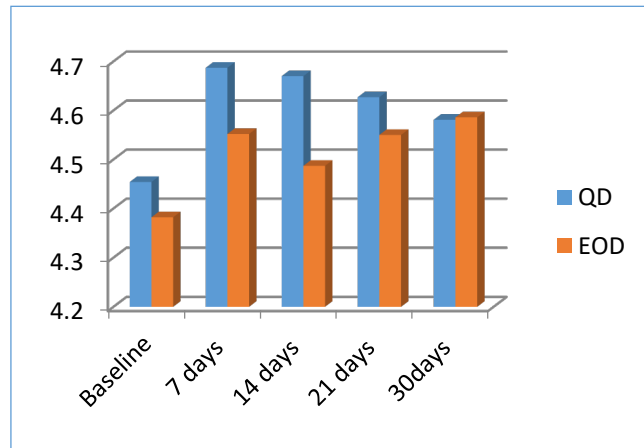


Figure 2. Concomitant Medication with Co-trimoxazole

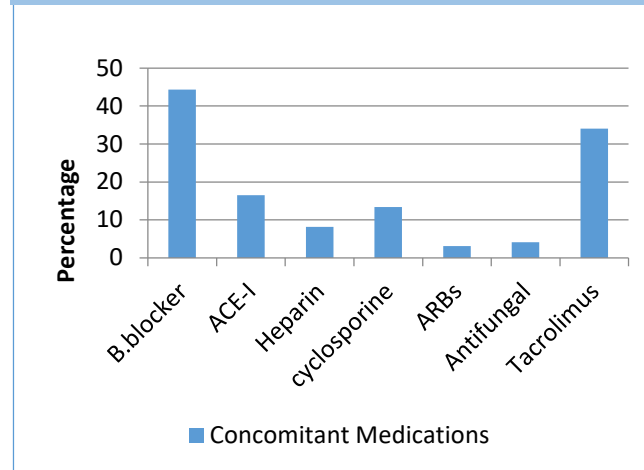
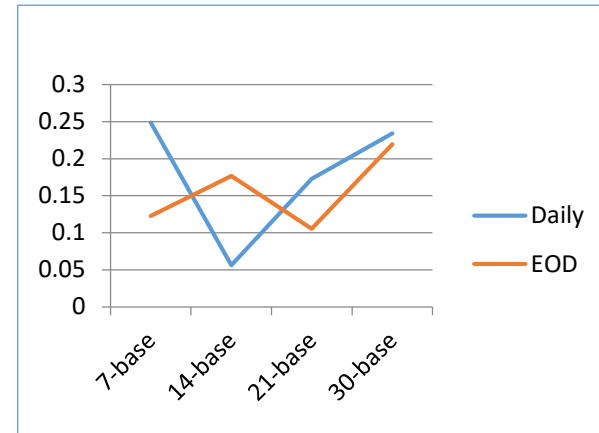


Figure 3. Change in K level from baseline to 7, 14, 21 and 30 days



## Results

- 161 patients were included in this study. Patients were taking cotrimoxazole either as once daily (47%) or every other day (53%).
- Co-trimoxazole was taken at doses: 480mg (19.1%), 960mg (66%), and 1920mg (14.9%).
- Eighty-nine patients (55.3%) were taking other concomitant medications that may also increase potassium level (i.e. ACE-I and B-blocker). Figure 2
- Around 26% of the patients treated with co-trimoxazole developed Hyperkalemia during the observed time (42 out of 161 patients).

## Results (contd.)

- There was no significant correlation between cotrimoxazole doses and hyperkalemia (25.9% in 480mg, 31.2% in 960 and 28.6% in 1920mg;  $p=0.863$ ) in each dose group, however, 82.5% of hyperkalemia cases were associated with significant increase in serum creatinine ( $p=0.00$ ).
- The highest mean change of potassium level in once daily dosing was at “baseline-7 days” interval, while it was highest at “baseline-30 days” interval in every other day dosing. However; none of the changes from baseline to 7, 14, 21 and 30 days was found to be significant. Figure 3

## Conclusion

Although many patients taking co-trimoxazole developed Hyperkalemia, the effect of renal function and use of other concomitant medications can't be ignored

**Disclosure:** None of the authors of this study have to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this study.