

anet alfa is currently the only FDA approved agent for the reversal of FXa inhibitors and should at minimum facilitate discussions amongst facilities on whether or not to add to their institutional formulary.

The American College of Cardiology has issued a guidance sheet, which now recommends andexanet alfa as first line therapy for the reversal of apixaban and rivaroxaban. Absent from their formal recommendation is edoxaban, but this is secondary to the low volume of subjects who were enrolled in the ANDEXA-4 trial who were receiving edoxaban. The Society of Critical Care Medicine/Neurocritical Care Society guidelines have not updated since andexanet alfa's approval but do have a section that mentions if available to consider andexanet alfa use. Also, it is important to highlight the heterogeneity between the majority of the studies evaluating PCC or andexanet alfa as it relates to how they measured hemostasis and safety parameters. In addition, each study that has evaluated FXa inhibitor reversal has not had a comparator group, which can lead to major confounders and bias. While an FDA approved agent for FXa inhibitor reversal was certainly welcomed there remains ambiguity as to which agent should be utilized first, as salvage therapy, or even combination.

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Antibiotic selection and isolate susceptibility profile in patients who failed ciprofloxacin or TMP-SMX for pyelonephritis



To the Editor

We read with interest the retrospective study by Vogler and Pavich assessing treatment failure in women diagnosed with uncomplicated pyelonephritis who were discharged from the emergency department on an oral fluoroquinolone (FQ) or trimethoprim-sulfamethoxazole (TMP-SMX) versus an oral cephalosporin. The primary endpoint of treatment failure occurred in 0% of patients receiving an oral cephalosporin and 23% of patients receiving FQ or TMP-SMX [1].

The authors stated in their discussion that the high resistance rates reported in their institution's weighted antibiogram may have predisposed the FQ/TMP-SMX group to higher treatment failure. However, according to their secondary objective analysis, only 3% of organisms isolated were resistant to ciprofloxacin. In contrast, 23% of organisms isolated were resistant to TMP-SMX. It would be of interest to know which antibiotic the ten patients who failed treatment received, either ciprofloxacin or TMP-SMX, and the isolates' susceptibility profile. The current presentation of data with TMP-SMX and ciprofloxacin being analyzed together, despite the strikingly different resistance rates, raises the question of whether the authors' conclusion that "treatment with oral cephalosporins may be a more appropriate therapy for uncomplicated pyelonephritis versus fluoroquinolones or trimethoprim-sulfamethoxazole" is appropriate without addressing if antibiotic resistance, particularly to TMP-SMX, was the main contributor to treatment failure in the FQ/TMP-SMX group. The manner in which the patient outcomes data were analyzed and presented leaves this as an unanswered question.

Moreover, we appreciate the authors' concern with prescribing empiric ciprofloxacin and TMP-SMX since their reported weighted-average antibiogram data demonstrated *Escherichia coli* non-susceptibility rates of 23% and 24% to ciprofloxacin and TMP-SMX, respectively. Further validating this concern is the Infectious Diseases Society of America guideline recommendation of using an initial one-time parenteral dose of ceftriaxone or consolidated 24-hour dose of an aminoglycoside for acute pyelonephritis when the prevalence of FQ resistance exceeds 10%, or if the uropathogen susceptibility to TMP-SMX is unknown [2]. It was noted in the arti-

cle that appropriate one-time doses of long-acting parenteral antibiotics were more frequently given in the cephalosporin group compared to the FQ/TMP-SMX group (78% vs. 53%, respectively). It would be of interest to see an analysis that separates patients discharged on TMP-SMX and FQ who received appropriate one-time doses of parenteral antibiotics from those who did not. This would allow for a clearer assessment into identifying any relationship between treatment failure and resistance (as mentioned above) or receipt of one-time dose antibiotics. We believe these are important parameters that the authors should have explored to determine why patients in the FQ/TMP-SMX group were less likely to be given an appropriate one-time dose of a long-acting parenteral antibiotic and perhaps address this through appropriate intervention at their institution.

Ultimately, the study demonstrated no treatment failures with oral cephalosporin therapy. Nevertheless, the conclusion that oral cephalosporins may be more appropriate therapy for uncomplicated pyelonephritis compared to FQs and TMP-SMX should be interpreted with caution.

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A-scan ultrasonography to detect intracranial hypertension in patients with hyponatremia



Dear Editor,

We read with great interest the significant paper written by Demir et al. concerning predictive and prognostic value of optic

nerve sheath diameter (ONSD) measurement associated with hyponatremia in emergency department [1].

We congratulate the authors for the originality of their article, but we would like to comment some aspects regarding the ONSD ultrasound evaluation.

In their study, Demir et al. utilized B mode ultrasound to measure ONSD in patients with hyponatremia, to detect potential intracranial pressure elevation. However, we consider this ultrasound technique unreliable for this purpose, because of the blooming effect [2–9]. B mode has been used for more than 50 years to diagnose several ocular and orbital diseases [10–12], but for measurements of small structures, such as ONSD, it has proven to be quite untrustworthy due to this effect. In fact, with decreasing the gain, the ONSD appears larger, so the absence of a standard gain setting when performing the examination means we cannot calibrate the author's results with others already published.

This effect may be overlooked with large structures, but not when resolution below 0.5 mm is assumed, as for ONSD appraisal.

For this reason we suggest the use of Standardized A Scan technique, a blooming effect free ultrasound method that displays easily noticeable high spikes from the interface between arachnoid and subarachnoid fluid, making these measurements more accurate and objective [13,14]. Moreover, A scan examination also allows the “30 degrees test”, which can discriminate between ONSD increase caused by raised intracranial pressure, and ONSD increase associated with other diseases, such as optic neuritis or optic nerve meningioma [15–18].

Furthermore, we would like to advise performing ocular ultrasonography with open eyelids, using methylcellulose and anesthetic drops, to clearly visualize the eye, making the probe orientation much more accurate, avoiding errors in detecting gaze direction [19,20].

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