

## Dipstick Test Shows Promise for Diagnosing Obstetric AKI

A salivary urea nitrogen (SUN) dipstick test is specific—but not sensitive—for diagnosis of obstetric-related acute kidney injury (AKI) in high-risk Malawian women, reports a study in the open-access journal *Kidney International Reports*.

The study included 301 pregnant or postpartum women at high risk of AKI. The women were admitted to the obstetric unit of a district hospital in Blantyre, Malawi, over a 12-week period. The patients' mean age was 26 years, and 11% were HIV positive. On admission, patients underwent the SUN dipstick test as well as serum creatinine measurement, with additional testing as indicated.

Acute kidney injury was diagnosed in 23 women. Of

these, nearly half had stage 1 AKI, mainly due to preeclampsia or eclampsia. Mean admission serum creatinine was 108.8 mg/dL in women with stage 1 AKI, 1.33 mg/dL in stage 2, and 1.36 mg/dL in stage 3. A SUN dipstick value of greater than 14 mg/dL was 97.33% specific for the diagnosis of AKI, with sensitivity of just 12.82%.

Area under the receiver operating characteristic curve with the SUN dipstick test was 0.551. Perinatal mortality was 25.0% for women with an SUN dipstick value greater than 14 mg/dL, compared to 11.8% for those with normal admission SUN.

Laboratory-independent tools for diagnosis of obstetric-

related AKI in low-income countries are needed. The SUN dipstick test has shown good performance in diagnosis of kidney injury in adult patients with acute and chronic kidney disease.

This study finds that the SUN dipstick is a specific but insensitive test for obstetric-related AKI among high-risk women in Malawi. A modified dipstick test with better sensitivity at lower ranges of SUN is under development and will be tested in pregnant and nonpregnant patients [Evans RDR, et al. A salivary urea nitrogen dipstick to detect obstetric-related acute kidney disease in Malawi. *Kidney Int Rep* 2018; 3:178–184]. ■

### Lactation:

#### Risk Summary

There are no human data regarding the effect of AURYXIA in human milk, the effects on the breastfed child, or the effects on milk production. Data from rat studies have shown the transfer of iron into milk by divalent metal transporter-1 (DMT-1) and ferroportin-1 (FPN-1). Hence, there is a possibility of infant exposure when AURYXIA is administered to a nursing woman. The development and health benefits of breastfeeding should be considered along with the mother's clinical need for AURYXIA and any potential adverse effects on the breastfed child from AURYXIA or from the underlying maternal condition.

**Pediatric Use:** The safety and efficacy of AURYXIA have not been established in pediatric patients.

**Geriatric Use:** Clinical studies of AURYXIA included 292 subjects aged 65 years and older (104 subjects aged 75 years and older). Overall, the clinical study experience has not identified any obvious differences in responses between the elderly and younger patients in the tolerability or efficacy of AURYXIA.

### OVERDOSAGE

No data are available regarding overdose of AURYXIA in patients. In patients with chronic kidney disease, the maximum dose studied was 2,520 mg ferric iron (12 tablets of AURYXIA) per day. Iron absorption from AURYXIA may lead to excessive elevations in iron stores, especially when concomitant intravenous iron is used.

In clinical trials, one case of elevated iron in the liver as confirmed by biopsy was reported in a patient on dialysis administered IV iron and AURYXIA.

### PATIENT COUNSELING INFORMATION

**Dosing Recommendations:** Instruct patients to take AURYXIA as directed with meals and adhere to their prescribed diets. Instruct patients on concomitant medications that should be dosed apart from AURYXIA. Advise patients not to chew or crush AURYXIA because tablets may cause discoloration of mouth and teeth.

**Adverse Reactions:** Advise patients that AURYXIA may cause discolored (dark) stools, but this staining of the stool is considered normal with oral medications containing iron.

AURYXIA may cause diarrhea, nausea, constipation, vomiting, hyperkalemia, abdominal pain, and cough. Advise patients to report severe or persistent gastrointestinal symptoms to their physician.

**Accidental Ingestion:** Advise patients to keep this product out of the reach of children and to seek immediate medical attention in case of accidental ingestion by a child.

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