

Journal View

Bile Casts

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Attention has been given to the concept of cholemic nephrosis or the pathologic relevance of renal bile casts.

The new study shows a high rate of intrarenal bile casts among patients with clinical jaundice. Bile casts may contribute to kidney injury via direct bile and bilirubin toxicity as well as by tubular obstruction.

The authors propose the term “bile cast nephropathy” as a condition causing impaired renal function in patients with severe liver dysfunction. It can affect adults and children with a wide range of hepatic disorders, with or without cirrhosis. The researchers call for further studies to clarify the prognostic and clinical implications of bile cast nephropathy [van Slambrouck CM, et al. Bile cast nephropathy is a common pathologic finding for kidney injury associated with severe liver dysfunction. *Kidney Int* 2013; 84:192–197]. ●

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Antimicrobials May Lower Risk of Urinary Tract Infection After Catheterization

For hospitalized patients with short-term urinary catheterization, giving antibiotics after catheter removal can reduce the risk of urinary tract infection (UTI), according to a meta-analysis in the *British Medical Journal*.

A systematic review of the literature identified seven controlled trials, six of them randomized, of antimicrobial treatment to prevent symptomatic UTI after removal of a short-term urinary catheter (14 days or less). The meta-analysis included data on 665 patients taking various antimicrobial drugs, for various durations, and 855 taking control treatments. Most of the studies included postoperative patients.

On pooled data analysis, there was a 5.8 percent absolute reduction in UTI risk in patients taking antimicrobial prophylaxis. The risk ratio for UTI in the antimicrobial group was 0.45. Seventeen patients had to be treated with antimicrobial prophylaxis to prevent one UTI.

Even with prompt catheter removal, hospitalized patients with urinary catheterization are at risk of UTI. Despite previous randomized trials, the benefits of antimicrobial prophylaxis in reducing this risk are unclear.

The new meta-analysis suggests a reduction of more than one-half of the risk of UTI for patients receiving antimicrobial prophylaxis after short-term catheterization. Further studies are needed to identify the patient subgroups most likely to benefit from antimicrobial prophylaxis, with attention to minimizing side effects, costs, and antimicrobial resistance [Marschall J, et al. Antibiotic prophylaxis for urinary tract infections after removal of urinary catheter: meta-analysis. *BMJ* 2013; 346:f3263]. ●

BP Phone Home: Telemonitoring Helps Control BP

A home telemonitoring intervention, including case management by pharmacists, led to significant and lasting reductions in BP, reports the *Journal of the American Medical Association*.

The HyperLink trial included 450 adults with uncontrolled BP, enrolled at 16 primary care clinics in an integrated health care system in Minneapolis/St Paul. One group of practices received the home telemonitoring intervention, in which patients were instructed to perform at least six BP measurements per week (three in the morning, three in the evening). The study pharmacists acted as case managers, adjusting antihypertensive therapy in response to the home BP readings. The control practices followed usual care.

The intervention and control groups were compared for rates of target BP below 140/90 mm Hg, or 130/80 mm Hg in patients with diabetes or chronic kidney disease. Assessment included 6 months of follow-up after the 12-month intervention period.

The mean age was 61 years, and 55 percent of patients were men. At baseline, the mean BP was 148/85 mm Hg, and patients were taking a mean of 1.5 antihypertensive drugs.

Home telemonitoring was associated with a significant increase in the number of patients meeting the criteria for BP control: 57.2 versus 30.0 percent at both 6 and 12 months. Six months after the intervention period, the rates were 71.8 and 57.1 percent, respectively.

The telemonitoring group had greater reductions in systolic BP, with differences of 16.7 mm Hg at 6 months, 9.7 mm Hg at 12 months, and 6.6 mm Hg at 18 months. The differences in diastolic BP were 6.0, 5.1, and 6.3 mm Hg, respectively. Telemonitoring was also associated with more intensified antihypertensive therapy, increased adherence to medications and sodium restriction, and some improvements in patient satisfaction. Safety was acceptable, although some patients at the lower BP target had hypotension-related events.

The HyperLink intervention, incorporating home BP monitoring and team-based care, reduced BP in patients with uncontrolled hypertension, compared with usual care. The intervention costs are estimated at \$1350 per patient per year. The authors plan further evaluations of cost-effectiveness and long-term cost savings [Margolis KL, et al. Effect of home blood pressure telemonitoring and pharmacist management on blood pressure control: A cluster randomized clinical trial. *JAMA* 2013; 310:46–56]. ●