Clinical Pathology Abstracts, 9/15

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Costs and outcomes after cardiac surgery in patients refusing transfusion

Numerous randomized, controlled trials have shown no benefit of a liberal blood transfusion strategy compared with a more restrictive strategy in surgical patients. Furthermore, concerns exist regarding the association of transfusion with postoperative morbidity and mortality. Efforts in patient blood management are aimed at identifying and treating anemia and iron deficiency, minimizing perioperative blood loss, and using more restrictive triggers. Patients who are Jehovah's Witnesses and are undergoing cardiac surgery require these types of strategies because many will refuse transfusion. The authors conducted a study in which they used a historical cohort to compare costs and outcomes after cardiac surgery in Jehovah's Witness patients who refused transfusion with a group of matched patients accepting transfusion. The authors performed a retrospective database review to find all patients having cardiac surgery who refused blood products, from January 2005 to July 2012 at Duke University Medical Center. These 45 patients were then matched 1:2 with controls who accepted transfusion. The analysis showed no significant difference in total cost for Jehovah's Witnesses and controls. Furthermore, there was no difference in intensive care unit length of stay for one day or total length of stay between both groups. Mean hemoglobin at discharge was higher in Jehovah's Witnesses than in controls, and the 30-day mortality was zero in both groups. The authors concluded that with the use of applicable blood conservation methods, cardiac surgery in Jehovah's Witness patients refusing transfusion can generate outcomes and cost from day of surgery to discharge similar to those of controls.

Guinn NR, Roberson RS, White W, et al. Costs and outcomes after cardiac surgery in patients refusing transfusion compared with those who do not: a case-matched study [published online ahead of print July 16, 2015]. *Transfusion.* doi:10.1111/trf.13246.

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Urine collection for the diagnosis of congenital cytomegalovirus infection

Cytomegalovirus infection is a leading cause of congenital infection worldwide. The virus is routinely diagnosed through detection in saliva or urine within the first three weeks of life. Urine samples are typically obtained with the use of sterile bags. However, because of difficulties with this type of collection due to loss of sample from leakage or contamination from feces, the investigators in this study used cotton balls placed in diapers to collect urine. The purpose of the study was to compare the results of viral culture and polymerase chain reaction (PCR) when urine was collected by bags versus cotton balls. The investigators examined 100,605 infants from March 2007 through March 2012 for congenital CMV (cCMV) infection. The results showed 346 infants who were CMV positive on newborn screening by saliva testing. In this group of infants, CMV rapid culture of urine specimens was positive in 93.2 percent of samples collected in a urine bag compared with 55.2 percent collected using a cotton ball. However, there was no difference in PCR positivity by sample-collection method. The authors concluded that PCR testing is a superior diagnostic testing modality for cCMV and has the added advantage of rapid turnaround

and lower cost compared with viral culture.

Ross SA, Ahmed A, Palmer AL, et al. Urine collection method for the diagnosis of congenital cytomegalovirus infection. *Pediatr Infect Dis J.* 2015;34:903–905.

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