

# Nadir platelet counts tied to AKI in pediatric open-heart surgery

January 23 2017

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(HealthDay)—For pediatric patients undergoing cardiopulmonary bypass

(CPB), postoperative nadir platelet counts are associated with the severity of acute kidney injury (AKI), according to a review published online Jan. 18 in *Pediatric Anesthesia*.

Shannon Tew, M.D., from Camelback Anesthesiology Consultants in Tempe, Ariz., and colleagues conducted a retrospective review of medical records and database for a single institution over a five-year period for 814 patients younger than 21 years undergoing cardiac surgery with CPB. They captured demographics, laboratory, and surgical characteristics, and recorded clinical event rates.

The researchers observed a 48 percent decrease in postoperative [platelet counts](#) from baseline, reaching a mean nadir value of  $150 \times 10^9 \text{ L}^{-1}$  on postoperative day three. Thirty-seven percent of patients had AKI, including 13, 17, and 6 percent, respectively, with Acute Kidney Injury Network stages 1, 2, and 3. There was a correlation for the magnitude of nadir platelet counts and the severity of AKI. Nadir platelet counts, CPB time, Aristotle score, patient weight, intraoperative packed red blood cell transfusion, and having a heart transplant procedure were independent predictors of AKI severity.

"In pediatric open-heart surgery, thrombocytopenia and AKI occur commonly following CPB," the authors write. "Our findings show a strong association between nadir platelet counts and the severity of AKI."

**More information:** [Full Text \(subscription or payment may be required\)](#)

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Citation: Nadir platelet counts tied to AKI in pediatric open-heart surgery (2017, January 23)

retrieved 25 April 2024 from

<https://medicalxpress.com/news/2017-01-nadir-platelet-tied-aki-pediatric.html>

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