

Abstract from Current Literature

Communicating Doses of Pediatric Liquid Medicines to Parents/Caregivers: A Comparison of Written Dosing Directions on Prescriptions with Labels Applied by Dispensed Pharmacy

S Rita, B Leona, Ed Kuffner, D Lisa

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Objective: To identify and compare volumetric measures used by healthcare providers in communicating dosing instructions for pediatric liquid prescriptions to parents/caregivers.

Study design: Dosing instructions were retrospectively reviewed for the 10 most frequently prescribed liquid medications dispensed from 4 community pharmacies for patients aged ≤ 12 years during a 3-month period. Volumetric measures on original prescriptions (ie, milliliters, teaspoons) were compared with those utilized by the pharmacist on the pharmacy label dispensed to the parent/caregiver.

Results: Of 649 prescriptions and corresponding pharmacy labels evaluated, 68% of prescriptions and 62% of pharmacy labels communicated dosing in milliliters, 24% of prescriptions and 29% of pharmacy labels communicated dosing in teaspoonfuls, 7% of prescriptions and 0% of pharmacy labels communicated dosing in other measures (ie, milligrams, cubic centimeters, "dose"), and 25% of dispensed pharmacy labels did not reflect units as written in the prescription.

Conclusion: Volumetric measures utilized by healthcare professionals in dosing instructions for prescription pediatric oral liquid medications are not consistent. Healthcare professionals and parents/caregivers should be educated on safe dosing practices for liquid pediatric medications. Generalizability to the larger pediatric population may vary depending on pharmacy chain, location, and medications evaluated.

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Pretransplant Serum Albumin Is an Independent Predictor of Graft Failure in Pediatric Renal Transplant Recipients

Daniel J. Tancredi, Lavjay Butani

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Objectives: To determine the prevalence of hypoalbuminemia in children listed for renal transplantation and to evaluate the effect of pretransplant hypoalbuminemia on posttransplant outcomes.

Study design: Retrospective cohort analysis of children receiving their first kidney transplant in the US between January 2000 and December 2010 obtained through the Organ Procurement and Transplantation Network. The primary outcome measure was time to graft failure. Cox regression analyses were used to estimate the independent effect of serum albumin on event incidence.

Results: Of the 6032 children who received transplants, 308 (5.1%) had a very low serum albumin level at registration; rates of transplantation in such children varied significantly across geographic regions (χ^2 , $P < .001$) ranging from 2.1% to 8.7%. Serum albumin was inversely associated with graft failure; each 1-g/dL increase in serum albumin was associated with a 19% reduction in risk of graft failure (adjusted hazard ratio 0.81, 95% CI 0.75-0.88, $P < .001$).

Conclusions: Considerable regional variation exists in the US with respect to transplantation in children with hypoalbuminemia. Severe hypoalbuminemia is an independent risk factor for graft failure. Transplant centers as well as patients need to be aware of this risk and make informed decisions regarding the optimal timing of transplantation. Whether graft failure is a consequence of the low serum albumin or the reflection of a higher inflammatory milieu remains to be explored.

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Prediction of the risk of coronary arterial lesions in Kawasaki disease by serum 25-hydroxyvitamin D₃**Yan-Li Chen, Juan-Li Wang, Wei-Qin Li**

Kawasaki disease (KD) is associated with the development of coronary arterial lesions (CALs) in children. We aimed to test the hypothesis that circulating 25-hydroxyvitamin D₃ [25-(OH)D₃] could be identified as a clinical parameter for predicting CALs secondary to KD in children. We enrolled 35 children with KD in the acute phase and measured serum 25-(OH)D₃ levels in all of them, then followed up by echocardiography for CALs. Additionally, serum 25-(OH)D₃ levels were obtained in 23 febrile children with respiratory tract infections and 30 healthy children.

Of the 35 KD children, nine had CALs according to echocardiography and 26 did not (NCALs). Serum 25-(OH)D₃ levels were not significantly different between NCALs and healthy children (49.2 ± 23.8 versus 44.1 ± 30.2 ng/ml; $P = 0.49$). Serum 25-(OH)D₃ levels were significantly higher in children with CALs than those without CALs (83.9 ± 26.3 versus 49.2 ± 23.8 ng/ml; $P = 0.001$). The cutoff value of 65 ng/ml to predict subsequent CALs had a specificity of 0.73, sensitivity of 0.78, and diagnostic accuracy of 0.74. *Conclusion:* Serum 25-(OH)D₃ levels were elevated during the acute phase in KD children who had subsequent CALs. Serum 25-(OH)D₃ levels in the acute phase of KD may be used to predict subsequent CALs.

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