



Central California Pediatrics

Specialty information for physicians who treat children and expectant mothers.



Managing Iron Deficiency Anemia

Latha Rao, MD
Pediatric hematologist/oncologist

November 2015

Anemia is typically defined as a hemoglobin concentration that is two standard deviations or below the mean for healthy individuals of the same gender and age. It is important to refer to published ranges for normal hemoglobin values specific for age. Iron deficiency is a common cause for anemia, especially in the toddler age group.

Iron deficiency is a systemic disease that may manifest by irritability and developmental delay. Screening children between 6 months and 1 year, and at 2 and 3 years of age, may decrease the risk of subtle adverse effects of iron deficiency on development. A brief, focused, dietary history is recommended at the 15- and 18-month health maintenance visits due to increased risk of developing iron deficiency at this age.

Symptoms and Diagnosis

Children with iron deficiency are usually asymptomatic; detection often occurs through routine screening. Symptoms like fatigue, decreased activity and pica (eating unusual items like ice, paper, dirt, etc.) may be noted. In some severe instances the child's hemoglobin could be as low as 1-2 g/dL and therefore require a blood transfusion in a hospital setting. Dietary iron deficiency is most common between the ages of 1 and 3 years. Milk intake of greater than 16 ounces in 24 hours in an 18-to-24-month-old child could indicate inadequate dietary iron intake.

Laboratory testing would include complete blood count (CBC) and all parameters including hemoglobin, mean corpuscular volume (MCV), mean corpuscular hemoglobin (MCH), red cell distribution width (RDW), RBC count and reticulocyte count. Iron panel should preferably include serum ferritin. Microcytic anemia with decreased RBC count, elevated RDW and low serum ferritin level would be most consistent with iron deficiency anemia although there might be deviations from the norm.

Treatment

For children with dietary iron deficiency, milk intake should be restricted to fewer than 16 ounces per day. The usual dose for iron supplementation in children is 4-6 mg/kg per day of elemental iron in two-to-three divided doses. Patients should be treated until the hemoglobin and hematocrit reach the normal range and given at least one-to-two months of additional treatment to replenish iron stores.

Referral

If the response to iron therapy is not adequate within four to eight weeks or if the anemia recurs, there may be iron malabsorption or noncompliance. The pediatrician may consider evaluating the child for thalassemia trait or lead poisoning. Consider referral to a pediatric hematologist for other potential causes of anemia.

Specialty Care Centers

Olivewood Specialty Care Center Merced - 209.726.0199
McHenry Specialty Care Center Modesto - 209.572.3880
34th Street Specialty Care Center Bakersfield - 661.843.8980

Valley Children's Physician Liaison

For questions or assistance, please call (559) 474-2707 or
or physicianrelations@valleychildrens.org

Children's Advocacy



Tim Curley
Director of Community
and Government Relations,
Valley Children's Healthcare

Below is an update on key items of interest to physicians as of Nov. 13, 2015.

California Children's Services (CCS) Program

Valley Children's continues to work with pediatric specialty care providers, CCS families and other stakeholders to design and implement changes to the CCS program that enhance the level of care provided to children with complex medical conditions. Earlier this year, the state Department of Health Care Services released a proposal to transition CCS-eligible children into Medi-Cal managed care plans in selected counties beginning in 2017. More recently, Gov. Brown signed Assembly Bill 187 into law, which preserves the CCS program's current structure for one more year. Valley Children's work with stakeholders is ongoing and we will continue to provide updates as warranted.

State Legislation

In addition to Assembly Bill 187, Valley Children's was active with the following state legislation in 2015.

Health Coverage for Kids

- Senate Bill 4: This bill makes non-substantive technical changes to the 2015-2016 state budget agreement adopted earlier this year with respect to the expansion of full scope Medi-Cal to undocumented children effective May 1, 2016. (Signed into law by Governor)

Medi-Cal Provider Rates

- Assembly Bill 366: Requires the state Department of Health Care Services to prepare an annual report regarding access to Medi-Cal services including the adequacy of Medi-Cal provider rates. (Held in Committee)

Public Health

- Senate Bill 115: Allocates \$1 million to support research for a valley fever vaccine. (Held in Committee)
- Senate Bill 277: Effective July 1, 2016, eliminates the personal exemption from childhood immunizations. (Signed into law by Governor) Organizations seeking to qualify a ballot initiative to overturn the legislation failed to collect the required number of signatures.

Physician Education

- Assembly Bill 174: Allocates \$1.255 million commencing 2016-2017 to expand the San Joaquin Valley Program in Medical Education. (Held in Committee)

For the latest information on these and other issues, visit Valley Children's Children's Advocacy Network at www.ValleyChildrens.org/CAN, or contact **Tim Curley at 559.353.8610** or TCurley@valleychildrens.org.

Medical Staff News

The following pediatric specialists recently joined Valley Children's:

Anesthesiology

Inger Aliason, MD
Carina Cheung, DO
Shelby Cody, MD
Elizabeth Cudilo, MD

Gastroenterology

Minesh Patel, DO

Hospitalists

Julie Celeberti, MD (Turlock)
Laura Maitoza, MD
Hasti Sanandajifar, DO

Imaging

Trevor Davis, DO
(interventional radiologist)

Infectious Diseases

M. Nael Mhaisen, MD

Maternal-Fetal Medicine

Cheryl Albuquerque, MD

Neurology

Muhammad Salim, MD
(epileptologist)

Orthopaedic Surgery

Jill Friebele, MD

Otolaryngology

Victor Duarte, MD
Giu Zhong, MD

The Willson Heart Center

Lakshmi Nagaraju, MD