

HEAD INJURIES



Central California Pediatrics

Specialty information for physicians who treat children and expectant mothers.



May 2016



Concussions in Children

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Pediatric Neuropsychologist

A concussion involves rapid onset of acute neurophysiological disruption at the cellular level, resulting in temporary and reversible changes to brain functioning. It also makes the brain susceptible to permanent damage during a vulnerability window that can last several weeks or even months.

Pathophysiology of Concussion

Concussion initiates a series of ionic, neurotransmitter and vascular changes. It results in a reversible period of cellular hypometabolism and cerebral blood flow uncoupling, during a time when metabolic demands are elevated. Immature myelination in children exacerbates these processes. Changes can begin within a minute and persist for weeks. Any additional injury or overuse of vulnerable cells can result in irreversible energetic failure and cell death, a condition that mimics traumatic brain injury (TBI). If the cells are allowed to regain metabolic homeostasis during the period of vulnerability, full return of functioning is expected.

Symptoms and Assessment

Common symptoms may include headaches, difficulty concentrating or thinking clearly, memory problems, fatigue, sleep disturbance, irritability, dizziness and loss of higher-level balance. Brain imaging has a low yield and is not generally indicated for concussion. If there is suspicion of more severe injury, or acute deterioration, brain imaging should be considered. The most sensitive method to detect and monitor

post-concussive symptoms is assessment by a specialist trained in brain injury, such as a pediatric neurologist or pediatric neuropsychologist.

Management

The goal of management is to facilitate recovery by ensuring the patient avoids activities and situations that may result in further injury or slowed recovery. With cognitive rest and no additional injury, symptoms should spontaneously resolve within a week or two. Protracted symptoms past two months are frequently associated with non-injury factors, or the injury is more severe than a concussion, and should be considered a TBI. Emergency care should be considered for extended loss of consciousness, vomiting, deterioration over time, seizures or other hard neurological signs.

Return to School and Recreation

Symptoms resolve a week or two prior to full physiological homeostasis, and the brain remains vulnerable for a short time following symptom resolution. A gradual return to learning activities should be based on tolerance. Begin with light mental activities. Once able to tolerate 30-45 minutes of cognitive activity, the patient can transition back to school with accommodations. Students should perform at their academic baseline for a week or more BEFORE returning to sports or full physical activity to allow for full resolution of the physiological vulnerable period.

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
Akers Specialty Care Center Visalia - 559-302-1245

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 May 16, 2016.

California Children's Services Program

As you may recall, the state Department of Health Care Services (DHCS) released a proposal in summer 2015 to transition CCS-eligible children into Medi-Cal managed care plans in select counties, beginning in 2017. Targeted counties in Valley Children's service area include Merced and San Luis Obispo, with the possibility of other counties participating as well. In May 2016, Valley Children's partnered with stakeholders statewide to amend an existing state bill, Senate Bill 586, by adding provisions to protect or enhance healthcare services for CCS children as they transition to Medi-Cal managed care plans. We will keep you updated as Senate Bill 586 makes its way through the legislative process and to the governor's desk for his signature.

Expansion of Full-Scope Medi-Cal to Undocumented Children

May 16, California children under 19 years of age, regardless of immigration status, will receive full-scope Medi-Cal coverage if they meet the program's income eligibility thresholds. Full-scope Medi-Cal includes coverage for both non-emergency and emergency medical services, dental care, vision benefits, mental health and substance use disorder services. An estimated 170,000 to 250,000 undocumented children statewide will become newly eligible through this expansion. For more information on the expansion, visit www.dhcs.ca.gov/services/medi-cal.

State Legislation

In addition to its advocacy in support of Senate Bill 586 and the CCS program, Valley Children's is actively supporting a number of other key state bills this year, including those listed below.

- Assembly Bill 1644 – Would extend the state's existing Early Mental Health Intervention and Prevention Services for Children Act to include public preschools.
- Assembly Bill 2004 – Would require a healthcare service plan contract to include coverage for hearing aids for an enrollee under 18 years of age.
- Senate Bill 22 – Would appropriate \$300,000,000 from the General Fund to the director of the Office of Statewide Health Planning and Development (OSHPD) to fund new and existing graduate medical education physician residency positions.

For the latest information on these and other issues, visit Valley Children's Children's Advocacy Network at 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:

Gastroenterology

Karla Au Yeung, MD
Minesh Patel, DO

Imaging

Ceayee Mak, MD

Infectious Diseases

M. Nael Mhaissen, MD
Chokechai Rongkavilit, MD,
Medical Director

Maternal Fetal Center

Susan Sherman, MD

Otolaryngology

Rachelle Wareham, MD

The Willson Heart Center

Lakshmi Nagaraju, MD

Valley Children's Physician Liaison

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