



Central California Pediatrics

MARCH 2023

Specialty information for physicians who treat children and expectant mothers.



Vascular Anomalies: How to Treat and When to Refer

Dr. Faisal Razzaqi
Valley Children's Oncologist

The terms vascular anomalies, vascular malformations and vascular tumors have commonly been used interchangeably when referring to vascular lesions that are present in children. There are many forms of vascular lesions, but in general, they are classified into two main groups: vascular tumors and vascular malformations. The evaluation, diagnosis and treatment of these lesions requires the collaboration of a team of experts. The Vascular Anomalies Team at Valley Children's is made up of pediatric hematologist/oncologists, interventional radiologists, and plastic and general surgeons.

Vascular tumors are benign tumors that are formed from blood vessels and can grow abnormally. The most common of these are hemangiomas, both infantile and congenital. Less common are more complex lesions such as kaposiform hemangioendothelioma (KHE).

Vascular malformations are lesions that are usually present at birth, but occasionally can be acquired. These lesions can involve abnormal development of capillaries, veins, lymphatics or arteries.

Why do children have vascular anomalies?

Vascular anomalies were initially felt to be spontaneous and random, but as our knowledge of genetics has expanded, we have identified genes and syndromes that can be associated with some of these anomalies.

How are vascular anomalies treated?

Treatments vary based on the specific lesion present. The lesions most physicians are familiar with are hemangiomas or "strawberry marks." An infantile hemangioma is not present at birth, although there can be a faint discoloration of the skin. The lesion will become apparent after a couple of weeks and grow most rapidly for several months (proliferative phase) until about one year of age. After that, the lesion will begin to regress over a time period of a couple of years (involution phase). The majority of these lesions do not need treatment, but indications for treatment include lesions that obstruct vision, affect feeding or are irritated by clothes or diapers. Those that need treatment are often treated with oral propranolol, which is best done during the proliferative phase.

Congenital hemangiomas are present at birth and fall into two general categories: rapidly involuting (RICH) and non-involuting (NICH). As the name implies, rapidly involuting lesions follow a similar course to infantile hemangiomas. Non-involuting hemangiomas may require surgical removal, but this is delayed until children are older if they are not causing problems. More aggressive vascular tumors such as KHE can cause complications such as thrombocytopenia, pain, invasion of local tissue, etc., and need more urgent treatment by a specialized team.

Vascular malformations can be simple or complex and treatment varies. For example, a simple capillary malformation can be treated with laser therapy. Complex lesions such as venous, lymphatic, veno-lymphatic or arteriovenous malformations often require a multi-pronged

approach including sclerotherapy, surgery and medication. Sclerotherapy is the injection of a sclerosing agent directly into a lesion, which causes it to scar and resolve. Although surgical removal is an option, it is often not possible due to the risk of significant morbidity and because lesions can recur. Historically, medical treatments had been limited, but over the last 20 years, an mTOR inhibitor, sirolimus, has shown good activity in treating these lesions. More recently, alpelisib, a medication that specifically targets PIK3CA positive lesions was approved by the FDA. Every child with a vascular malformation should be evaluated by the vascular anomalies team to discuss and customize their treatment options.

Referring Patients to Valley Children's Healthcare

Patients with classic infantile or congenital hemangiomas can continue to be directly referred to the plastic surgery department at Valley Children's. For other lesions or if you are unsure of what to do, patient can be referred to Valley Children's Cancer and Blood Disorders Center with a request for the vascular anomalies clinic. Our team will ensure that the patients are triaged and seen appropriately.

To learn more about our Cancer and Blood Disorders Center, review our 2022 Cancer and Blood Disorders Center Annual Report.



Valley Children's Receives National Recognition for 25 Years of Specialized Heart Care

As one of the first facilities accredited by the Intersocietal Accreditation Commission (IAC) in Echocardiography, Valley Children's has joined an elite group honored with the 25-year Silver Accreditation Milestone for demonstrating a continued commitment to offering quality patient care. This milestone makes Valley Children's the only hospital – adult and pediatric – in the state with a 25-year silver level accreditation of excellence for echocardiography, and just one out of only 46 currently accredited facilities that qualify for the for this milestone.

Medical Staff News

The following pediatric specialists recently joined Valley Children's:

Maternal Fetal

Lynsa Nguyen, MD

Gastroenterology

John-Paul Berauer, MD

Primary Care

Cynthia Kim, DO

Upcoming CME Opportunities

Pediatric Clinical Symposium Virtual Education

Presented by Latha Rao, MD

Wednesday, April 26

2:15 PM - 1:15 PM

Register for Valley Children's CME events through our CME Tracker, cmetracker.net/VCH



@valleymeded



@valleychildrensmeded