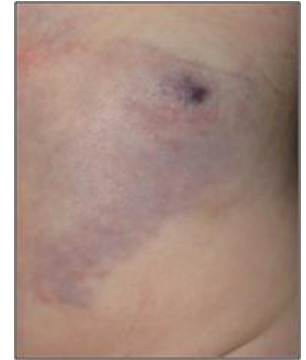


What is a venous malformation?

Veins are blood vessels that carry blood with less oxygen back to the heart. A venous malformation is when the veins are thinner and more open (dilated) than normal. It causes a blue to deep blue or purple mark under the skin. Because of slow blood flow, the veins do not tighten and expand as they should. This can cause blood clots to form. The clots may be painful. These blood clots do not normally travel to other parts of the body.



Where do they appear?

They can appear anywhere on the skin or inside your body. Most often they appear on the head or neck. The area may be small or may affect an entire arm or leg. The skin may be puffy or warm to the touch. Rapid growth can happen during puberty and pregnancy. The cause is not known. They are there at birth and may run in families.

How are they diagnosed?

A venous malformation is confirmed by an MRI or an ultrasound test. The doctor may also want to do a small skin biopsy.

- An **MRI** scanner uses a large magnet, radio waves and a computer to take pictures of inside the body. It does not use radiation.
- An **ultrasound** uses sound waves to make pictures of the body. Your child will not hear or feel the sound waves. It is not an x-ray and does not use radiation.

A venous malformation may go unnoticed for years.

What problems could the malformations cause?

- Bleeding
- Pain
- A change in the look of the area involved.
- Can cause problems breathing or speaking if it is on the tongue or in the airway.
- If blood clots form in the arm or leg, they can cause pain and swelling. They also raise the risk of a blood clot in the lung.

How are they treated?

A venous malformation will not go away without treatment.

- **Compression therapy.** A tight fitting garment is sometimes used to help the veins tighten and expand better. This helps prevent skin infections and bleeding too. Compression will also protect the arm or leg from being injured. Special pumps put on the outside of the skin can be used to help the blood flow better.
- **Pain medicine, antibiotics, or raising the arm or leg.** These help with pain, swelling, infection and bleeding.

Treatment, continued

- **Blood thinning medicine.** This keeps the blood from clotting. It also helps with the pain caused by clots.
- **Surgery.** In some cases, the affected area may be removed. This depends on where the malformation is, if it is causing pain or if it affects movement.
- **Sclerotherapy.** A solution is injected into a blood vessel. This will cause the inside of the vessel to swell so blood cannot flow through it. The vessel will then collapse and form scar tissue.
- Sometimes surgery and sclerotherapy are used together.

Other helpful websites or references

- National Organization of Vascular Anomalies (NOVA), <http://www.novanews.org/>.
- Vascular Birthmarks Foundation, <http://www.birthmark.org/>.

ALERT: Call your child's doctor, nurse, or clinic if you have any concerns or if your child has:

- Bleeding that will not stop.
- An infection that does not heal.
- Pain that does not get better with pain medicine.
- Special health care needs not covered by this information.

This sheet was created to help you care for your child or family member. It does not take the place of medical care. Talk with your healthcare provider for diagnosis, treatment and follow-up.