



A patient information flyer developed by the Asian Society of Pediatric Dermatology on

PORT WINE STAINS

What are port wine stains (PWS)?

- PWS are birthmarks that occur due to abnormal development of capillaries, a type of blood vessel in our body.
- They are usually present at birth and do not resolve spontaneously.
- About 3 in 1,000 babies are born with a PWS.
- Although they can occur on any part of the skin, they occur most commonly on the head, neck and limbs.

What do PWS look like and what happens to them as my baby grows?

- PWS usually appear as pink or pale purple patches on one side of the scalp, face, neck or limbs.
- It affects boys and girls equally and do not usually run in families.
- They can vary in size from a few millimetres to a big patch covering almost half of the face or limb.
These patches grow in proportion to the growth of the child.
- Although, in the initial 6 months of life, there might be an apparent lightening of the initial colour, this must not be mistaken as a sign of resolution.
- With age, the colour can darken and the affected skin may become thicker and lumpy.

What problems can occur with PWS?

- Uncomplicated PWS do not usually cause any symptoms. However, they can affect the quality of life of the affected individual and their family due to their appearance.
- Eczema can develop over a PWS, which may become itchy or sore.
- Rarely, PWS can occur in association with other abnormalities depending on the location.
- PWS occurring on the forehead or around the eye may be associated with eye abnormalities, including increased pressure (glaucoma), requiring treatment by a paediatric ophthalmologist.
- PWS on the upper face / forehead can be associated with brain abnormalities, like fits and delayed development (Sturge-Weber-Syndrome). This may require further investigations with scans or referral to a paediatric neurologist.
- PWS on the central back overlying the spine can be linked to an underlying spinal defect (spinal dysraphism). This may require referral to a paediatric neurosurgeon.
- Klippel-Trenaunay-Syndrome occurs when there is enlargement of the limb affected by the PWS, which may also develop enlarged deeper varicose-type veins.

Do all PWS require treatment?

- PWS are not harmful and do not require treatment.
- However, if they are left alone, they can darken in colour during adolescence or adulthood and the skin can become thicker.
- Lumps can form and lead to a cobblestone-like appearance, which may lead to bleeding.

What options are available for the treatment of PWS?

- PWS can be lightened by treatment with lasers, in particular, the pulsed dye laser (PDL). Early treatment is recommended for best results, as the baby's skin is thinner and the PWS is relatively small and light.
- Laser treatment can be performed from a few weeks of age and has to be repeated every 4 to 6 weeks for up to 10 to 15 times or more in some cases.
- Results and number of required treatment sessions can vary depending on the site of the lesion and the initial colour.
- PWS can darken again later in life, requiring repeat treatments.
- Laser treatments can be done without the use of general anaesthesia (GA) in younger babies. However, for children above 1 year of age, it is recommended for laser treatment to be performed under GA.
- Post-laser, bruising is often observed, which can last for 1 to 2 weeks. The skin can become more sensitive to rubbing. Other possible temporary side effects include blistering and crusting. Scarring is rare. Permanent loss of hair may occur in hair-bearing areas.
- The aim of treatment is to lighten the PWS, as it is often not possible to make it disappear completely.

