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In This Issue...

- ▶ **Vascular Birthmarks**
- ▶ **Safe Remedies While Breastfeeding**

**Terminology:
Asperger's Syndrome.....5**

Complementary Medicine: Sage.....5

Test Your Knowledge6

DIC Real Enquiry6

**Taking cough and cold medicines
while breastfeeding.....7**



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Vascular Birthmarks

What are vascular birthmarks?

They are marks made up of excess or abnormal blood vessels in the skin. There are many different types, and here we describe the three most common vascular birthmarks: salmon patches; port wine stains; and strawberry naevi.

Salmon patch (stork mark or naevus simplex)

Salmon patches are flat red or pink patches that can appear on a baby's eyelids, bridge of the nose, neck or forehead at birth.

They're the most common type of vascular birthmark and occur in around 40% of all babies.

Most salmon patches will fade completely within a few months, but if they occur on the forehead they may take up to four years to disappear. Patches on the back of the neck can last longer. 50% of those present on the nape of the neck persist into adult life.



Salmon patches are often more noticeable when a baby cries because they fill with blood and become darker. No treatment is required.

Port wine stains "PWS" (naevus flammeus)

A port wine stain is a pink, red or purple mark or patch on the skin that is usually present at birth. They usually affect only one side of the body. They can develop on any area of the skin, but the face and upper trunk are the most common sites. They are recognised by their typical appearance.

What causes a port wine stain?

The cause of port wine stains is not fully understood. However, they are thought to develop in areas of skin lacking the small nerves that control the constriction of small blood vessels. The blood vessels stay open, causing a permanent blush in the affected area of skin.

Port wine stains occur in approximately 3 per 1000 births, affecting males and females and all racial groups equally. Usually they are not hereditary.

What are the symptoms of port wine stains?

They do not usually cause any symptoms but they can produce long-term psychological trauma and problems with self-image and self-esteem if they are present on visible areas such as the face.

Later in life port wine stains can become deeper red or purple in colour and become raised or lumpy and more difficult to cover with makeup. The raised areas can bleed easily if they are scratched. Port wine stains of the eyelid area and upper jaw sometimes lead to glaucoma. Patients with facial port wine stains are rarely prone to seizures and require further assessment and investigation. An extensive port wine stain of a limb may be associated with an increase in growth of that limb.

How can port wine stains be treated?

A lot can be done to reduce their psychological impact, including:

Laser treatment

Lasers are the gold standard for PWS removal. The pulsed dye laser (PDL) is used most commonly, but other light-based devices are used to achieve desired lesion lightening.

Usually more than 10 treatment sessions are required and complete lesion lightening may not occur. It helps most patients, particularly if the mark is on the face, and the lesion is treated as early in life as possible before the birthmark becomes thickened but may not clear the stain completely.



Multiple factors limit laser treatment efficacy:

- 1- Competitive absorption of therapeutic laser light by epidermal melanin reduces the light dose reaching target blood vessels. This limitation is particularly significant among patients with darker skin types.
- 2- Small superficial vessels (<20 μm in diameter) rapidly diffuse the heat induced by laser therapy and are thus difficult to photocoagulate.
- 3- Revascularization may occur owing to neovascularization and reperfusion of partially damaged vessels.

In older children, port wine stains can be treated using a local anaesthetic, e.g. an anaesthetic cream. Young children, and those having very extensive areas treated, especially around the eyes, will need to have laser treatment under a general anaesthetic or with sedation. Depending on the size and site of the birthmark, up to 10 treatment sessions may be required at intervals of approximately 8 weeks.

Cosmetic camouflage

Cosmetic or camouflage creams prepared to match the patient's skin color are often very helpful.

STRAWBERRY NAEVI (Infantile Haemangiomas)

These are soft raised vascular swellings on the skin, often with a bright red surface, that may have the appearance of a strawberry. They usually appear after birth, often within the first month, and may occur anywhere on the skin. Strawberry naevi occur in about 5% of the population. They are commoner in females, premature babies and multiple births.

They are not a sign of ill health, or associated with cancer. There are many myths about their cause that should be discounted and parents should not feel responsible if their child develops one.

What causes strawberry naevi?

The cause is not fully understood. They are a benign overgrowth of blood vessels in the skin, and are made up of cells that usually form the endothelial cells of blood vessels. They are thought to occur as a result of a localised imbalance in factors controlling the development of blood vessels. They are also not hereditary.

What are the symptoms of strawberry naevi?

Usually there are no symptoms but they can be visible and be unsightly. A few grow quite rapidly and can become large and may bleed or become infected.

What do strawberry naevi look like?

At birth, they are usually absent or appear as a red or bruise-like patch. After birth there is a rapid growth phase usually in the first 5 to 8 weeks. 80% strawberry naevi reach their final size by 3 months. The early growth phase is followed by a slower growth phase. Finally the strawberry naevus regresses or becomes smaller in size and resolves over a period of years (usually 3 years), but most cease to improve after 3.5 years of age. Usually there is only one haemangioma, but sometimes several may occur. They can appear on any area of skin but



a majority 60% do so on the face and neck.

If the haemangioma is near the surface of the skin, it will be bright red, like a strawberry, whereas if it is located deeper, it may appear blue in colour. When located deep beneath the skin, the haemangioma may be skin coloured. The result following involution is often very good. Sometimes the skin stretched by the strawberry naevus will be thin, loose or scarred after the haemangioma has shrunk. Plastic surgery reconstruction can help when the child is older. It is not possible to accurately predict how fast or how large strawberry marks will grow, how long they will take to shrink, or whether they will leave a mark behind.

Diagnosis will be based on the appearance of the haemangioma and on the way it grows.

How can strawberry naevi be treated?

Most do not require treatment as they resolve spontaneously. For most “active non-intervention” is the best option and consists of education, reassurance that the naevus will resolve, observation and good skin care of the overlying skin e.g. with an emollient. Bleeding may occur but, even with accidental trauma, this is likely to be minor.

It can be stopped easily and quickly with gentle pressure followed by a sterile dressing to cover the area that bled.

A small number require treatment usually for one of three reasons: because of ulceration; because it may cause disfigurement (e.g. if present on the centre of the face); or because it is causing or may cause impairment of function of a vital organ e.g. impair development of hearing or vision. These are best treated early to avoid complications. The treatment is aimed at inducing rapid shrinkage.

Current treatment options

• ***β-blockers:***

- Propranolol

Is a β -blocker used to treat high blood pressure. Its use has dramatically altered the treatment of strawberry naevi over the past 5 years since it was discovered to be an effective treatment for strawberry naevi. Oral propranolol is now considered by most experts to be the first-line treatment for strawberry naevi requiring treatment and has been successfully used in babies with large complicated haemangiomas. It is effective in halting the growth and diminishing the size of strawberry naevi.

- Topical timolol solution

Can be useful to treat small surface strawberry naevi that do not need oral treatment.

• ***Steroids***

Have been used by injection and by mouth for the rare haemangiomas that are serious or dangerous because of their size or location. The use of steroids has mostly been taken over by oral propranolol when treatment is required.

• ***Laser treatment (pulsed dye laser therapy)***

Can be used to stop bleeding in ulcerated haemangiomas, and can speed up healing and shrink age of the haemangioma.

References:

- 1) www.bad.org.uk/shared/get-file.ashx?id=238&itemtype=document
- 2) www.nhs.uk/Conditions/Birthmarks/Pages/Introduction.aspx
- 3) www.ncbi.nlm.nih.gov/pmc/articles/PMC3570568/
- 4) www.merckmanuals.com/professional/dermatologic-disorders/benign-skin-tumors,-growths,-and-vascular-lesions/capillary-malformations#v8370073

Terminology

Asperger's Syndrome

A lifelong personality disorder, evident from childhood and regarded as a mild form of AUTISM. Persons with the syndrome tend to have great difficulty with personal relationships. They tend to take what is said to them as literal fact and have great difficulty in understanding irony, metaphors or even jokes. They appear shy with a distant and aloof character, emotional rigidity and inability to adapt to new situations. They are often mocked and ill-treated at school by their fellows because they appear unusual. Many people with Asperger's seem to take refuge in intense interests or hobbies, often conducted to an obsessional degree. Many become skilled in mathematics and particularly information technology. Frustration with the outside world which is so hard to comprehend may provoke aggressive outbursts when stressed.



Source: Marcovitch H. *Black's Medical Dictionary*. 41th ed. London: A&C Black Publishers Limited. 2005.

Complementary Medicine

Sage (المريمية)

Species (Family):

Salvia officinalis L. (Labiatae/Lamiaceae)

S. lavandulifolia Vahl

Constituents

Sage contains acids, flavonoids, terpenes, triterpenes, tannins and volatile oils.

Herbal Use

Leaf is the part used of sage. Sage is stated to possess carminative, antispasmodic, antiseptic, astringent and antihidrotic properties. Traditionally, it has been used to treat flatulent dyspepsia, pharyngitis, uvulitis, stomatitis, gingivitis, glossitis (internally or as a gargle/mouthwash), hyperhidrosis, and galactorrhoea. Sage is credited with the ability to enhance memory. The German Commission E approved internal use for dyspeptic symptoms and excessive perspiration, and external use for inflammation of mucous membranes of mouth and throat.

Dosage: Dosages for oral administration (adults) for traditional uses recommended in standard herbal reference texts are:

Leaf 1–4 g as an infusion three times daily; 4–6 g daily.

Gargles, rinses 2.5 g/100mL water.

Contra-indications, Warnings

Sage oil is toxic (due to the thujone content) and should not be ingested. *S. lavandulifolia* oil has a much lower content of thujone than does *S. officinalis* oil. In view of the toxicity of the essential oil, sage extracts should be used with caution and not ingested in large amounts.



Drug interactions None documented. However, the potential for preparations of sage to interact with other medicines administered concurrently, particularly those with similar or opposing effects, should be considered. There is limited evidence from preclinical studies that sage has hypoglycaemic activity. Sage oil has a high content of thujones, which are convulsants.

Pregnancy and lactation Sage is contra-indicated during pregnancy. Traditionally, it is reputed to be an abortifacient and to affect the menstrual cycle. The volatile oil contains a high proportion of a- and b-thujones, which are known to be abortifacient and emmenagogic. Sage should not be used during lactation.

Source: Barnes J, Anderson L A, and Phillipson J D. *Herbal Medicines*, 3rd ed. London: Pharmaceutical Press; 2007.



1. Which of the following products is NOT indicated as an agent to be used in gastrointestinal ulcer healing?
A. Omeprazole B. Rabeprazole C. Misoprostol
D. Loperamide E. Ranitidine
2. Concern the following products:
A. Buscopan B. Zaditen C. Voltaren emulgel
D. Natrilix E. Lescol

Select, from A to E, the product that should be used with caution in each of the following conditions:

- i. prostatic hypertrophy
 - ii. asthma
 - iii. gout
3. Urinary tract infections are most commonly caused by:
A. Helicobacter pylori B. Campylobacter jejuni
C. Escherichia coli D. Mycobacterium tuberculosis E. Rhinovirus



At the "Drug Information Center", we respond to enquiries from the professional healthteam as well as from others. Here's one of the enquiries received at the center:

Enquiry received from: Pharmacist M.S.- *University Hospital – Assiut University*.

Enquiry: Is there an available product in the market called Fasinex? I've heard of such drug for treatment of *Fasciola hepatica*. Is there a drug available in the market for treatment of fascioliasis?

Summary of the answer:

There is a drug under the name "Fasinex" with the active ingredient **triclobendazole** and is the only medicine recommended by the WHO against fascioliasis. It is active against both immature and adult parasites, and may therefore be employed during the acute and chronic phases.

Fasinex is not available in community pharmacies, but you may ask about getting treated with it in specialized public hospitals.

Consider using a saline nasal spray or a nasal decongestant spray as an alternative to an oral decongestant. Only minimal amounts of a nasal decongestant are thought to be absorbed into bloodstream, and may be used for up to 3–4 days while breastfeeding. Using a nasal decongestant spray for longer than this may cause nasal congestion to recur or worsen.

Sedating antihistamines

Sedating antihistamines are found in some combination cough and cold medicines. They can cause drowsiness in to the mother and sleepiness and irritability in her baby. Small, occasional doses may be used if necessary, and only under the guidance of a health professional.

Codeine

Taking a medicine containing codeine while breastfeeding can cause drowsiness in the baby. It should only be used for the shortest possible time.

Medicines for pain and fever

For pain or fever, paracetamol is the best choice for breastfeeding mums. It can be used at the dose recommended on the packaging.

Ibuprofen is one of the most commonly used non-steroidal anti-inflammatory drugs (NSAIDs) for breastfeeding mothers, and it can also be used safely at the dose recommended on the packaging.

What else to do to relieve symptoms?

- Rest and drink plenty of water and fluids.
- Avoid exposure to cigarette smoke.
- Inhale steam to help relieve a blocked nose.

You can help soothe a sore throat by:

- Gargling with warm salty water.
- Sucking on an ice cube or a throat lozenge.
- Drinking hot water with honey and lemon — a simple and effective home remedy.

Source: www.nps.org.au/topics/how-to-be-medicinewise/Medicinewise-questions/medicinewise-questions/taking-cough-and-cold-medicines-while-breastfeeding

Answers:

- 1. D)** Omeprazole and rabeprazole inhibit gastric acid formation by blocking the hydrogen-potassium ATPase pump hence the name proton pump inhibitors (PPIs). Misoprostol is a synthetic prostaglandin analogue having antisecretory properties, thus helping in the healing of gastric ulcers. Misoprostol is used in elderly patients taking non-steroidal anti-inflammatory drugs and in patients in whom the non-steroidal anti-inflammatory drugs cannot be discontinued. Ranitidine decreases the gastric acid output by antagonising the histamine H₂ receptor. PPIs, misoprostol and H₂-receptor antagonists can all be used in the treatment and prophylaxis of gastric ulcers. Loperamide is an antidiarrhoeal agent.
- 2. i.- A)** Buscopan contains hyoscine butylbromide, which is a quaternary ammonium compound with antimuscarinic properties. It is used as an antispasmodic and therefore may be useful in irritable bowel syndrome. Hyoscine butylbromide as with all antimuscarinics, must be used with caution in patients with prostatic hypertrophy, as they may lead to urinary retention.
- 2. ii.- C)** Voltaren emulgel is a proprietary preparation of diclofenac. Diclofenac, like all the non-steroidal anti-inflammatory drugs, may lead to bronchoconstriction (particularly when used systemically) and therefore must be used with caution in asthma.
- 2. iii.- D)** Natrilix is a proprietary preparation of indapamide, a thiazide diuretic and hence may cause gout as a side-effect.
- 3. C)** Urinary tract infections are very commonly caused by Gram-negative bacteria such as *Escherichia coli*, the *Proteus* species and *Pseudomonas* species.