Spider Naevus

Synonyms: arterial spider, vascular spider, naevus araneus, naevus arachnoidius, spider angioma, tache stellaire, étoile vasculaire.

Spider naevi is the name given to small angiomata which appear on the surface of the skin. They were first described in 1869 by the English physician Erasmus Wilson who noted them on the skin of a publican.[1] They are described as ‘spiders’ due to their appearance - the central, ascending vessel resembling the body of a spider, with the finer radiating vessels looking like the legs of a spider.

Spider naevi may be an indication of underlying disease, particularly alcoholic cirrhosis of the liver, but can also occur in healthy individuals, especially pregnant women, or in response to pharmacological agents. Although the pathogenesis is unknown, it seems likely that they are a manifestation of disturbed circulating sex hormone activity. This may cause an elevated estradiol/free testosterone ratio. Alternatively, particularly in alcoholic cirrhosis, they may result from serum vascular growth factors in combination with alcohol, leading to neovascularisation, especially in younger patients in whom they are more common.[2] Substance P may also be involved in patients with non-alcoholic cirrhosis.[3]

Epidemiology:
- 15-20% of healthy individuals will have one or more spider naevi.
- Multiple spider naevi are more indicative of underlying disease.
- They are common in children, particularly of school age.[4] They show an equal sex incidence.
- Spider naevi may also develop in pregnancy, or when taking combined hormonal contraception.
- Just one, or a few spiders, are more common in women.
- There is probably no racial difference in prevalence but they are less obvious on darker skin.

Presentation

Spider naevi are usually asymptomatic. Presentation is either due to possible concern about the aetiology or, especially if they are on the face, because of cosmetic effect. Rarely, they may bleed with minor trauma.

They are small lesions with a number of tiny blood vessels radiating from them to resemble the legs of a spider. The centre is about 1 mm in diameter and the whole lesion about 5-10 mm across. Firm pressure with a glass slide or something small, such as the end of an opened paper clip, will cause it to blanch and when the pressure is released it will rapidly refill from the central arteriole.

Lesions most frequently occur on the face, below the eyes, and over the cheekbones. Other common sites include the hands, forearms and ears. Spider naevi may occur on the trunk, or on the scalp, neck, arms and hands. Almost all spider naevi occur on the upper part of the body and only 1% below the umbilicus. Traditional teaching is that they are restricted to areas drained by the superior vena cava but this is disputed by William Bean, one of the great founders of hepatology.[5] Although healthy individuals may have one or more lesions, the presence of large numbers suggests underlying disease. Look for other stigmata of liver disease.

Ask about drugs, as these may cause liver damage. Ask about alcohol consumption.
Differential diagnosis

Spider naevi may be differentiated from other lesions with a similar appearance by the fact that they blanch with pressure, as described above, and refill again from the centre outwards.

- **Campbell de Morgan spots** are bigger red spots without vessels radiating and they tend to occur in older people.
- **Insect bites** may have a central punctum and should soon resolve. They may itch.
- Dilated small blood vessels are seen in the condition telangiectasia. **Osler-Rendu-Weber syndrome** is a condition in which multiple areas of telangiectasia occur.
- **Haemangioma** is a larger red spot, often raised.

Investigations

For most healthy young people with a single lesion, or just a few, and especially children, no investigation is required. Otherwise, assess liver function, including hepatitis markers. TFTs may also be indicated, as they can occur with thyrotoxicosis.

Associated conditions

Spider naevi may be associated with any condition that results in increased circulating levels of oestrogen, including:

- Pregnancy
- Alcoholic cirrhosis
- Hepatic cirrhosis
- Hepato-pulmonary syndrome

Management

Usually no treatment is required and many will fade spontaneously or resolve as the underlying condition improves. Spider naevi may be treated with laser therapy or electrocoagulation if desired for cosmetic reasons. [6]

Prognosis

Benign lesions tend to resolve spontaneously but may take a number of years to do so. If associated with pregnancy they tend to go about six or seven months after delivery. They will also resolve some time after stopping combined oral contraception. If associated with liver disease, they may resolve if the liver disease improves.
Epilogue

Although Erasmus Wilson made the classic description of spider naevi, it was William Bean who studied them extensively and who noted the association with cirrhosis, especially of the alcoholic kind. He will also be remembered for his poetry on the subject of alcoholic cirrhosis, spider naevi and palmar erythema and it is worthy of repetition:[7]

An older Miss Muffett
Decided to rough it
And lived upon whisky and gin.
Red hands and a spider
Developed outside her -
Such are the wages of sin.

Further reading & references


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