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Palmoplantar keratoderma

What is keratoderma?

'Keratoderma' is a term that means marked thickening of the skin.

'Palmoplantar' refers to the skin on the soles of the feet and palms of the hands; these are the areas keratoderma affects most often. Palmoplantar keratoderma is also sometimes known as 'keratosis palmaris et plantaris'.

Classification of keratodermas depends on whether or not it is inherited, and its clinical features.

- Diffuse keratodermas affect most of the palms and soles.
- Focal keratodermas mainly affect pressure areas.
- Punctate-type keratodermas result in tiny bumps on the palms and soles.
- Most often the abnormal skin involves only the palms and soles (non-transgradient) but sometimes it extends on to the top of the hands and feet as well (transgradient).

In some rare forms of keratoderma other organs in the body may be affected in addition to the skin, and the keratoderma can be a marker of this internal abnormality.

Palmoplantar keratoderma



What causes palmoplantar keratoderma?

Keratoderma may be inherited (hereditary) or, more commonly, acquired.

- Hereditary keratoderma: the condition runs in families and is passed down or from one or both parent(s) to their children
- Acquired keratoderma: the condition is not inherited and occurs as a result of a change in the health or the environment of the affected person

The hereditary keratodermas are caused by a gene abnormality that results in abnormal skin protein (keratin). They may be inherited either by an autosomal dominant or autosomal recessive pattern.

- Autosomal dominant keratodermas are likely to occur in every generation of a family. If one parent is affected there is a 50% chance that each child will be affected.
- Autosomal recessive keratodermas occur less commonly within an affected family. This is because both parents need to pass on an abnormal gene to the child for it to be affected. People with one affected gene

only do not have the condition themselves but carry the abnormal gene and are referred to as 'carriers' of the disease. They may pass on the abnormal gene to their children but the children will only be affected if their other parent also carries an abnormal gene and passes it on to the same child.

Specific types of keratoderma

The table below lists the main types of hereditary palmoplantar keratoderma (PPK)

Diffuse hereditary palmoplantar keratodermas
<ul style="list-style-type: none"> • Unna–Thost type (autosomal dominant) • Verner's type (autosomal dominant) • Mal de Meleda type (autosomal dominant or recessive) • Huriez syndrome (autosomal dominant) • Olmsted syndrome (unknown inheritance pattern) • Vohwinkel syndrome (autosomal dominant) • PPK with sensorineural deafness (mitochondrial inheritance) • Bart–Pumphrey syndrome (autosomal dominant) • Hidrotic ectodermal dysplasia (autosomal dominant) • Papillon–Lefevre syndrome (autosomal recessive) • Diffuse PPK with woolly hair and arrhythmogenic cardiomyopathy (autosomal recessive)
Focal hereditary palmoplantar keratodermas
<ul style="list-style-type: none"> • PPK striata/areata type (autosomal dominant) • Hereditary painful callosities (autosomal dominant) • Howell–Evans syndrome (autosomal dominant) • Richner–Hanhart syndrome (autosomal recessive) • Pachyonychia congenita (autosomal dominant) • Striate PPK with woolly hair and dilated cardiomyopathy (autosomal recessive)
Punctate palmoplantar keratodermas
<ul style="list-style-type: none"> • Punctate keratoderma (autosomal dominant) • Filiform keratoderma (autosomal dominant) • Marginal keratoderma (autosomal dominant)

[Acquired palmoplantar keratodermas](#) may be focal or diffuse. They may arise in association with a variety of different skin and internal conditions:

- An inflammatory skin condition (e.g. eczema or psoriasis)
- Infections
- Medications and toxins
- An internal cancer
- An non-cancerous internal disease
- Circulation problems

Related information

References:

On DermNet NZ:

- [Diffuse hereditary palmoplantar keratoderma](#)
- [Hereditary focal palmoplantar keratoderma](#)
- [Punctate keratoderma](#)
- [Acquired keratoderma](#)
- [Cracked heels](#)

Other websites:

- [Keratosis Palmaris et Plantaris](#) - emedicine dermatology, the online textbook

Books about skin diseases:

See the [DermNet NZ bookstore](#)

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DermNet does not provide an on-line consultation service.

If you have any concerns with your skin or its treatment, see a [dermatologist](#) for advice.

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