



Skin conditions of children and adults with Down syndrome

Part 1 of 2

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There are many features or disorders of the skin observed in individuals with Down syndrome (DS). These range from common conditions such as xerosis (dry skin) and keratosis pilaris to rare disorders such as elastosis perforans serpiginosa.

The following skin conditions are worthy of discussion and an attempt has been made to place them in order from most to least prevalent.

1. Xerosis (dry skin)

This is exceptionally common in people with Down syndrome, and is considered by many to be part of the phenotype. The skin appears dry and scaly although it is not itchy or red (as with eczema or atopic dermatitis). To remedy this skin condition, a change in body washing habits is necessary. Rather than showering in hot, soapy water, which washes away the skin's natural oil (sebum), individuals should have less hot showers and use a 'soap free' wash (which is quite different to liquid soap). There are many brands of 'soap free' washes available from pharmacies. As well as this, extra moisturizer should be applied on a daily basis. Any moisturizer that is cheap and feels light is suitable. It is not necessary to buy moisturising cream with additives such as Aloe Vera, Vitamin E, Ti Tree Oil etc. Note that very thick moisturisers may block follicles on hairy skin and may predispose the individual to folliculitis (to be covered in Part 2).

2. Keratosis pilaris

This occurs in about 30-40% of the general population but is even more common in people with Down syndrome, and often more extensive. It manifests as multiple small, red, rough (sand-paper like) pin-point papules, each one occurring at the site of an often barely visible hair follicle. They mimic exaggerated

goosebumps. They are generally symmetrical in distribution and common sites are the back of the upper arms, outer thighs, buttocks and cheeks, though they may be more widespread and involve areas of the chest, abdomen and back. They are asymptomatic and an example of a nuisance disorder, though distinction from folliculitis is important. They are not contagious and usually need no treatment. In fact, treatment is a difficult, often only temporary, solution and there is a lifelong tendency to this condition. Moisturiser and/or mild keratolytics may be used for the roughness, and vascular laser has been used for the redness though re-treatment may be periodically required.

3. Atopic dermatitis (Eczema)

It is controversial as to whether there is an increased risk of atopic dermatitis in people with Down syndrome. My view is that it is not more likely. It is a very common condition across the population. Areas of affected skin are inflamed (red and itchy, sometimes weeping or crusted). The details of management for eczema are beyond the scope of this article, however, the basics of management include preventative measures (all the treatments discussed above, under Xerosis) as well as avoiding/treating itchiness by keeping cool, avoiding woollen clothing, wearing loose cotton clothing and by cool compressing. Treat any inflammation with anti-inflammatory medication, usually topical steroids (weaker ones for the face and stronger ones for the body), or the newer non-steroid topicals (pimecrolimus or tacrolimus). Failure to improve is commonly seen with under

use of prescribed topical treatments by parents/carers or prescription of inadequate amounts. Also consider measures to reduce *Staphylococcus aureus* colonization (remove crust if present, periodic use of sodium hypochlorite or bleach baths, antiseptics or antibiotics with some anti-*Staphylococcus* cover).

4. Alopecia areata and Vitiligo

Alopecia areata tends to be more severe in people with Down syndrome than in the general population. It is a condition in which rapid onset of distinct, well defined bald patches occur. The bald areas are usually round or oval and are most common on the scalp where they are easily noticed, though they can occur on any area of the skin which supports hair (eyebrows, beard area etc). It is essentially a nuisance or cosmetic disorder only: the areas affected are not itchy, painful, scaly or irritated. The bald patches often resolve spontaneously after a few months, without any treatment. Although treatments to accelerate hair regrowth are imperfect, strong topical steroid creams or steroid injections into the areas could be tried for the willing and cooperative few. More rarely the areas become extensive involving all of the scalp hair (alopecia totalis) or even all body hair (alopecia universalis).

Vitiligo is caused by a reduction in cells that provide skin colour, resulting in smooth, white patches surrounded by normally coloured skin. This is also a nuisance disorder affecting the appearance of the skin only. Treatments to resolve it are highly imperfect and cosmetic camouflage and sun-protection measures are the best advice for the majority. Alopecia areata and vitiligo are both considered auto-immune disorders. As such, if one disorder is present, there is an increased risk of the other occurring.

Part 2 of this article, dealing with skin infections and disorders, will be published in *Voice*, March 2011

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Opening up university education to students with intellectual disabilities (p 10)

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