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Silk garments

This is one of several bulletins supporting the implementation of NHS England (NHSE) guidance on items which should not be routinely prescribed in primary care. The guidance classifies silk garments as items of low clinical effectiveness, where there is a lack of robust evidence of clinical effectiveness or significant safety concerns.[1]

In England, Wales, Northern Ireland, Isle of Man and Scotland, £570,882 is spent annually on prescribing silk garments (NHSBSA England and Wales (Jan-Dec23), and Public Health Scotland (Nov22-Oct23)). In England a decrease in spend of £50,362 (16%) from 2017/18 has occurred since NHSE issued their guidance. Table 1 shows the spend on silk garments across the UK.

Table 1. Spend on silk garments in England, Wales, Scotland and the Isle of Man (NHSBSA England and Wales (Jan-Dec23), and Public Health Scotland (Nov22-Oct23)

	Latest 12 month spend on silk garments	Silk garment spend per 100,000 population
England	£359,371	£570
Isle of Man	£752	£8
Northern Ireland	£81,361	£3,974
Scotland	£113,158	£1,897
Wales	£16,240	£494
Total	£570,882	£767

Recommendations

- Do not initiate silk garments as there is a lack of robust evidence of clinical effectiveness.
- Deprescribe silk garments where they have already been initiated.
- Provide the 'changes to prescribing of silk garments' leaflet to patients and/or carers for whom silk garments will no longer be prescribed.
- Integrated Care Boards (ICBs)/Health Boards (HBs) should ensure that local guidance on silk garments is up to date and in line with national guidance.

Background

Silk garments/clothing are available as an alternative to elasticated viscose stockinette garments, for use in the management of severe eczema and allergic skin conditions.[2] They have also been used in the management of other conditions such as vulvar conditions, epidermolysis bullosa and burns.[3]

In atopic eczema, synthetic fabrics and wool tend to itch and irritate the skin and cotton fabric is usually recommended. The rubbing movement generated by short fibres in cotton can lead to irritation in particularly delicate skin.[4]

In atopic eczema, silk garments are claimed to be beneficial as they can help to regulate the humidity and temperature of the surface of the skin, are smooth in texture and may reduce skin damage from scratching.[5] As some people can be allergic to the sericin protein in silk,[4] specialist garments are often made with sericin-free silk.[5,6] Some products will also have antimicrobial properties that may help to reduce the bacterial load on the skin.[5]

Silk garments are classified as medical devices. If a medical device is included in the Drug Tariff then it can be prescribed on FP10.[7] However, this does not necessarily mean that it is appropriate to prescribe the medical device. NHS organisations may recommend that medical devices are not prescribed, for example where they are not considered to be cost-effective choices and/or where there is limited evidence of clinical effectiveness.

Three brands of silk garments are currently listed in the Drug Tariff (Part IXA - Appliances (England and Wales) , Part 2 - Dressings (Scotland) and Part III (Northern Ireland)): DermaSilk®, DreamSkin® and Skinnies® Silk. Items available include leggings, body suits, socks, gloves, hats, bras, boxer shorts, briefs, shirts, baby grow, eye masks, clavas, vests and pyjamas in a range of sizes from babies to adults.[6-9] All the garments contain knitted medical grade silk that has been treated to remove the natural gum (sericin). The fibre is then coated with either an antibacterial (DermaSilk®, Skinnies™ silk) or a polymer (DreamSkin®).[6,8,9]

National Guidance

The National Institute for Health and Care Excellence (NICE) clinical guideline [CG57] on the treatment of atopic eczema in children does not make a recommendation on silk garments. The NICE guidance states that whole-body (limbs and trunk) occlusive dressings (including wet wrap therapy) or whole-body dry bandages (including tubular bandages and garments) should not be used as first-line treatment for atopic eczema in children. If using these treatments, they should be started by a healthcare professional trained in their use.[10]

Guidance from the Scottish Intercollegiate Guidelines Network (SIGN) on managing atopic eczema in primary care issued in 2011, has not been reviewed and has now been withdrawn.[11]

The NHSE guidance on items which should not be routinely prescribed in primary care includes silk garments, which are classified as items where no prescribing is appropriate (i.e. no exceptions apply). There is limited evidence supporting the efficacy of silk clothing for the relief of eczema and silk garments are unlikely to be cost-effective for the NHS. The NHSE guidance recommends that silk garments should not be initiated and should be deprescribed where currently prescribed. No exceptions to this guidance were identified.[1]

Silk garments are also included in guidance from the All Wales Medicines Strategy Group (AWMSG) - Items Identified as Low Value for Prescribing in NHS Wales – Paper 3. This guidance makes the following recommendations, with no routine patient exemptions identified:

- Advise HBs that prescribers in primary care should not initiate silk garments for any new patient with eczema.
- Advise HBs to support prescribers in deprescribing silk garments in all patients and, where appropriate, ensure the availability of relevant services to facilitate this change.[12]

Clinical Effectiveness

Published trials have been small and limited to infants and children. The largest trial to date, was the CLOTHES trial, funded by the National Institute for Health Research (NIHR) Health Technology Assessment (HTA) programme. In this parallel observer blind randomised controlled trial (RCT), 300 children aged 1 to 15 years with moderate to severe atopic eczema were randomised to receive sericin-free silk garments (Dermasilk® or Dermaskin®) plus standard care or standard care alone for six months

followed by a two month observational period. Primary outcome (eczema severity) was assessed at baseline and at two, four and 6 months using the Excema Area Severity Index (EASI), by nurses blinded to treatment allocation. The primary analysis included 282/300 patients (141 patients in each group). Garments were worn for at least 50% of the time by 82% of participants. There was no evidence of any difference between the groups in EASI score averaged over all follow-up visits adjusted for baseline EASI score, age, and centre: adjusted ratio of geometric means 0.95, 95% CI 0.85 to 1.07, (p = 0.43).[13]

For the secondary outcomes in the CLOTHES trial, there were no between-group differences in nurse-assessed atopic eczema severity, quality of life or medication use. Some small differences were observed for two of the participant-reported secondary outcomes, most probably as a result of response bias and the collection of multiple outcomes.[5,13] The associated HTA concluded that the trial found no evidence of any clinical or economic benefit of using silk garments compared with standard care and that the use of silk therapeutic garments represents poor value for money for the NHS.[5]

Details of a small, non-randomised controlled study that evaluated the effects of wearing silk clothing with antibacterial properties compared with continued use of cotton clothing in children with a flare of atopic eczema, were included in the full version of the NICE guideline on atopic eczema in children.[14] Ricci et al recruited 46 children with atopic dermatitis (AD) aged from two months to ten years. 31 of these were allocated to use of silk clothing (DermaSilk®) continuously for seven days, the other participants wore cotton clothing. Topical emollients were the only treatments allowed. Severity of symptoms was scored using a clinically validated scoring system ('SCORAD' index) by an investigator blinded to clothing type in each patient. At the end of the seven days, there was a 30% reduction in score for those using silk garments (p = 0.003), compared to a 2% reduction (p=0.886) in the control group. They also found a statistically significant reduction in severity score for a localised area covered by silk clothing (42% reduction, p=0.01) compared to another area left uncovered during the trial (16% reduction, p=0.112). The NICE guideline development group stated that no conclusions could be drawn from this poor quality study and made no recommendation.[14,15]

A systematic review in 2013 of 13 studies of functional textiles (silk, silver coated cotton, borage oil, ethylene vinyl alcohol fibre) concluded that the evidence for the use of functional textiles in AD treatment is weak. More studies with better methodology and longer follow-up are needed.[16] As part of the NHSE low priority prescribing work, the NHS Specialist Pharmacy Service (SPS) completed a clinical evidence review on silk garments. This review identified the 2013 systematic review by Lopes et al and a further 5 randomised controlled trials (RCTs) with >30 patients, including the CLOTHES trial. SPS noted methodological limitations in all of the identified RCTs, in particular very small numbers of participants (range 11 to 300); it is widely recognised that treatment effect estimates are significantly larger in smaller trials, regardless of sample size.[3]

Prescribing review

Guidance in England and Wales does not identify exceptions where prescribing of silk garments may be appropriate, so deprescribing is likely to be appropriate in most cases.[1,12] ICBs/HBs should ensure that local guidance on silk garments (such as the local formulary) is up to date and consider the use of individual funding requests to permit prescribing in cases where the clinical circumstances are exceptional.

Organisations considering a review of prescribing should ensure that the process is agreed locally by all key stakeholders including GPs, dermatologists, tissue viability nurses and other relevant healthcare professionals.

If there are exceptional cases for individual patients where silk garment prescribing is approved, the following are recommended:

- Provide one set of garments initially to ensure fit and comfort. Care must be taken in selecting the correct item/size to avoid wastage.

- Provide one further set to allow for washing, and if appropriate a third set as a spare. The patient should use all two/three sets within one week, rotating frequently.[5]
- Do not add silk garments to repeat prescriptions. Children will need different size garments as they grow, and all patients should be reviewed regularly to assess efficacy.
- Moisturising creams should be applied thinly to the skin (just enough for the skin to glisten) a few minutes before putting on the clothing to allow the creams to be absorbed into the skin.[5]
- Advise the patient (or their carer) to check and follow the manufacturer's instructions regarding washing and caring for their items. The fibres of silk garments are quite delicate. Washing the garments inside a pillowcase on a delicate cycle will protect them during the wash. If possible, lay garments flat to dry.[5]

Patient information

PrescQIPP resources include patient leaflets that explain why certain medicines (including silk garments) are included in the NHS England Items which should not routinely be prescribed in primary care guidance. The leaflets signpost to sources of further information, such as for silk garments a link to a patient video explaining the results of the CLOTHES trial.

The National Eczema Society have produced a factsheet which provides information and advice regarding clothing for eczema patients and details of possible brands and suppliers for self-ordering and purchase for those patients who wish to try this option.

Costs

The cost of silk garments depends on the brand, the type of item and the size, e.g. the approximate current cost ranges per garment are:[7]

- Child's body suit - £36.52 to £45.59
- Leggings - £25.92 to £83.84
- Long sleeved vest (Top) - £46.64 to £82.87

In the CLOTHES trial, participants received three sets of garments (long-sleeved vest and leggings, or body suits and leggings, depending on the age of the child). Garments were replaced as required. The mean cost of silk garments, including initial and replacement garments, was £318.52 per participant. 45.5% of participants required at least one replacement garment over the six month period. Participants were recruited between November 2013 and May 2015 so costs today may differ.[5,13]

Savings

In England, Wales, Northern Ireland, Isle of Man and Scotland, £570,882 is spent annually on prescribing silk garments (NHSBSA England, Wales, Northern Ireland and Isle of Man (Jan-Dec23), and Public Health Scotland (Nov22-Oct23).

An 80% reduction in the prescribing of silk garments could release savings of approximately £420,373. This equates to an average saving of £565 per 100,000 population.

Organisations can review their silk garment spend and potential saving within the PrescQIPP visual data pack. The PrescQIPP infobriefs can be used to explain the key messages of Look, Review, Do, alongside the silk garment prescribing data cost per 1,000 patients or number of patients (England data only available for patient level data).

Data for PrescQIPP subscribers

In addition to the bulletin visual data pack, PrescQIPP subscribers can access the PrescQIPP low priority prescribing data scorecards and the low priority prescribing data visualisations. These further resources include commissioner and practice level data on silk garment prescribing, alongside other low priority prescribing data.

Summary

Silk garments have been used in the management of eczema and a number of other conditions.[2] Although some brands of silk garments are included in the Drug Tariff and so can be prescribed on an NHS FP10 prescription,[7] NHS England and the AWMSG advise against their routine prescribing in primary care due to a lack of robust evidence of clinical effectiveness.[1,12] Stopping the prescribing of silk garments has the potential to release savings which could be used for other more effective treatments or service improvements.

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Additional PrescQIPP resources

Briefing	https://www.prescqipp.info/our-resources/bulletins/bulletin-346-silk-garments/
Implementation tools	
Data pack	https://data.prescqipp.info/views/B346_Silkgarments/FrontPage?%3Aembed=y&%3Aiid=1&%3AisGuestRedirectFromVizportal=y

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