An overview of common skin complaints seen in primary care

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The knowledge needed to diagnose skin conditions in primary and community care can be elusive, daunting and confusing. By using thorough history-taking, excellent physical assessment skills and thinking ‘outside the box’, healthcare professionals can formulate a differential and working diagnosis to improve patient access to appropriate management, including medications, lifestyle changes and referral as needed. Simple history-taking tools, relevant mnemonics and good resources can help patients to be managed quickly and effectively, and thereby improve outcomes and reduce the need for time delay in diagnosis. This article intends to demystify the dermatology conundrum and give healthcare professionals the tools to simplify the treatment of common skin conditions.

KEYWORDS:
Skin conditions  ■  History-taking  ■  Assessment  ■  Resources

Nurses working in community settings and those working in first contact and primary care will encounter a wide variety of skin conditions. Some, such as eczema, will be allergic in nature, but others may be caused by external factors, such as strong detergents or hand cleansers, as in dermatitis (National Eczema Society, 2014). While others may be related to systemic disease — for example, venous ulcers and dehydrated or dry skin from diabetes and peripheral vascular disease (PVD).

Good history-taking can help to identify the underlying cause of the skin condition and indicate what actions should be taken to treat it.

Older patients who live alone may have poor nutrition and hygiene and this can affect the skin as well as general health (Brownie, 2006). Ensuring that patients are well hydrated, coping in their home and eating well can be difficult, but this can make all the difference to long-term outcomes.

A good knowledge of anatomy, physiology and systemic diseases along with some useful diagnostic tools may be all that is needed to ensure that the correct treatment is implemented and prevention measures put in place.

SKIN ANATOMY

The skin is the largest organ in the body and provides a protective barrier against bacteria and other organisms. When skin integrity is lost, infection is more likely, so maintaining soft, supple skin is vital.

The homeostatic function of the skin is important, namely, protection from external environmental influences (such as bacteria and viruses) through skin integrity, thermoregulation, electrolyte balance and sensation, i.e. pain, touch, heat and cold. If there are large areas of blistering, erythema or exudate, this may affect temperature control and can reduce levels of dehydration. Skin thickness varies depending on body region, but it can be very thin — only 2mm in some places, e.g. on the eyelids. In some patients with pre-existing conditions, such as diabetes or autoimmune diseases, or those using certain medications such as steroids, the skin will be thinner, more friable and prone to tears and bruising.

It is important to understand the structure of the skin (Figure 1). The epidermis is a protective layer that contains melanin. The dermis contains sweat glands, nerve endings, hair follicles and sebaceous glands. Dermal collagen provides structure and support for the skin. Some of the factors that can affect skin conditions include age, immunosuppression, medications, lifestyle and environment (Hess, 2011).

THE SKIN AND AGEING

Epidermal thinning occurs in older people. This means that minor problems may be difficult to manage and the reduction in the number of Langerhans cells may result in a loss of the skin’s immunity, although there is a lack of research evidence in this area. Decreased absorption and vitamin...
D production can result in bone loss and decreased muscle strength with melanocyte activity declining and increasing overall pallor. Glandular activity also declines and the skin becomes dry and scaly with less efficient thermoregulation. Thermoregulation is also reduced by dermal blood supply and may even be affected by poor hair follicle function. The dermis will thin and there will be a reduction in elastic fibres, with wrinkles and sagging being the hallmark of this. There is also a decrease in the speed with which skin heals and can repel infection.

TAKING A HISTORY WITH LESIONS AND RASHES

To aid diagnosis your consultation should include:
- History of the presenting complaint
- Past medical, family and social history, i.e. occupation, home life, support networks and hobbies if relevant
- Medication history
- An examination of the skin, hair and nails
- Any further immediate assessment that may be required, e.g. vital signs and urine testing.

When describing lesions and rashes, consider:
- The site and number of lesions
- Distribution
- Arrangement, such as concentric circular lesions, single lesions, lines of blisters, scattered spots — all essential in aiding diagnosis
- Consider palpating the lesion
- Type of lesion, e.g. blisters, nodules, pustules, crusting lesions, red rashes
- The surface features/texture
- Colour
- Border
- Shape.

Practice point

When assessing patients with skin problems, you should ideally look at all of the skin and check the hair and nails too.

UNUSUAL LESIONS AND WHEN TO BE CONCERNED

When assessing a lesion that may be malignant, consider the mnemonic ABCDE (Whited and Grichnik, 1998; Walters-Davies, 2013; Skin Cancer Foundation, 2014):
- Appearance/asymmetry: does this look sinister or benign?
- Border: is this irregular in any way? Is one side a mirror image of the other?
- Colour: is this very dark or does it have some pigmented areas? Has it changed?
- Diameter: is this large or increasing in size? Lesions that are larger than 4mm may need further investigation
- Evolving/exposure: is this a high-risk area of the skin, such as a bald patch, the top of the ears and the tip of the nose.

Some high-risk areas include the ears, lower lip or a hairless scalp. These are often areas where sunscreen is missed or is difficult to apply.

OTHER FACTORS TO HELP DIFFERENTIATION

With rashes and skin lesions, consider the distribution and arrangement. For example, a shingles (herpes zoster) rash will generally be on one side only (Figure 2) and linear, whereas conditions like psoriasis may display a number of lesions on the extensor surfaces (Figure 3).

Molluscum contagiosum (Figure 4), which usually occur in small groups in crevices, is normally only seen in the younger age groups. The varicella zoster rash can start with tingling in the dermatome related to the nerve root in which the
virus has been dormant, and post-herpetic neuralgia can cause painful sensations in the area affected (Johnson and Rice, 2014).

Looking at groups of lesions can help to differentiate between chronic and acute conditions. Very widespread, itchy rashes that are accompanied or preceded by fever may indicate viral or bacterial aetiology, whereas lesions that have been present for some time and have not changed, could indicate a more chronic problem such as psoriasis.

**TINEA OR FUNGAL INFECTIONS**

Fungal infections are also known as tinea. Examples are tinea cruris in the groin, tinea capitis in the head and tinea corporis on the body. Infection of the nails (Figure 5) should be taken seriously, as it can be a marker of serious systemic disease, such as immunosuppression. Additionally, long-term conditions, such as diabetes or PVD, can lead to nail abnormalities. Even minor nail infections should be investigated and treated to investigate any comorbidity.

Intertrigo (Figure 6) is a rash that can occur in the folds of the skin and may host a fungal infection. This can be worse in hot weather or in patients with multiple skin folds. This fungal infection can be caused by candida but because of the unusual site, it may need more than clotrimazole cream. Ketoconazole or miconazole cream might be necessary or even oral antifungals may be considered, although caution is needed when prescribing for older people, for example if they have reduced liver or kidney function. Creams with added steroids should be used with care as they may make the tinea ‘incognito’, and therefore difficult to assess as the appearance of the rash will be markedly changed.

**ANGULAR CHEILITIS**

A fungal infection in the mouth caused by candida can result in angular cheilitis (cracks in the corners of the mouth). This can be treated with oral nystatin, but this problem may be a sign of pre-existing conditions such as diabetes, immunosuppression through disease or treatment, malnutrition or even poorly fitting dentures.

**USING STEROIDS**

Steroid creams can be useful for thickened skin, such as psoriasis, although vitamin D analogues are sometimes preferred. In scaly lichenified eczema, steroid ointments are preferable. They are also better for dry skins, as they are greasier and improve moisture retention.

Steroid creams are listed as mild, moderate, potent and highly potent. These creams reduce itching very quickly. Ideally, they should be used as a short course of a few days rather than a little every day for many weeks, as skin thinning can occur from repeated use. Mild rather than potent creams (Joint Formulary Committee, 2014) are useful since the strength can always be increased as necessary. A potent cream may be considered if the problem is severe, or when the problem affects the palms or soles of the feet. This should help to control the condition, at which point treatment can be stepped down to milder creams. A mild preparation should always be used on the face. Finally, consider using ointment for dry skin, as this will help with moisturising and aid absorption of steroid creams.

**EMOLLIENTS**

The use of emollients is essential for most dry skin conditions, particularly eczema and dermatitis. When used appropriately before using steroid creams, they can improve absorption, and when used with an antibacterial, they can promote venous return and even reduce bacterial load in varicose eczema, which is often increased in patients with eczema (UK Medicines Information, 2012). Emollients need to be applied regularly and soap substitutes are also recommended, although aqueous cream is no longer recommended (National Eczema Society, 2014). There are many different types available and it should be easy for a patient to find one they find suitable. If an eczema-type rash persists, check the nails, hair and other skin areas for signs of other possible systemic causes.

**SKIN INFECTIONS**

Cellulitis is an acute bacterial infection of the skin and is most likely to be caused by *Streptococcus pyogenes* (Figure 7). Superficial infections are termed erysipelas (usually caused by group A beta-
haemolytic streptococcus) and these can be treated with a topical antibacterial cream, such as fusidic acid twice daily if the patient does not have red flag symptoms, e.g. fever, feeling shivery, or a rapidly spreading area of erythema (Oh et al, 2014). In these situations the patient will require oral or intravenous penicillin.

Skin infections can also occur in postoperative wounds, ulcers, blisters and even insect bites. Topical treatment should be considered first in older people since many common medications can be affected by antibiotics. Impetigo (infection of small, cracked areas with Staphylococcus aureus) and boils/furuncles (Figure 8) are best treated with topical therapy, unless the problem has increasing margins or the patient is systemically unwell, in which case oral therapy should be chosen. Flucloxacillin is a good choice for oral therapy, unless the problem has not have red flag symptoms, e.g. fever, feeling shivery, or a rapidly spreading area of erythema (Oh et al, 2014). In these situations the patient will require oral or intravenous penicillin.

VENOUS AND ARTERIAL ULCERS

Arterial ulcers may be noted in the toes or shin or over pressure points. Older patients often present with a history of intermittent claudication or a rest pain, which is usually relieved by being placed in a dependent position. Patients may report that to ease the pain in their limbs they have to sit on the edge of the bed and dangle their legs. The patient’s medical history may include smoking and other risk factors for atherosclerosis, such as hypertension, hyperlipidaemia and diabetes. A history of minor trauma to the leg is sometimes reported.

There is a need to differentiate between arterial and venous ulcers before treatment is decided upon. In the first instance, consider your line of questioning, symptoms and history-taking, as well as Doppler assessment, but refer to the tissue viability nurse for further advice. Compression should only be used if there is no doubt that there is no arterial involvement. For more information, refer to Top Tips for Nurses: 5 Differences between Venous and Arterial Leg Ulcers (Nurses for Nurses Network, 2012), which can help to explain the differences between the two types of ulcer and the importance for establishing this.

WHEN PROBLEMS PERSIST

These can include persistent and non-healing leg ulceration, itchy and dry skin conditions, dry and friable skin. These are problems associated with diabetes, old age, frailty and the use of common medications, such as warfarin and oral prednisolone (Miller, 2012). Return exercises can help to prevent venous ulcers, but lack of mobility, poor diet and immunosenescence can overwhelm this and venous or sometimes arterial ulcers may develop where there is preexisting comorbidity, such as PVD or diabetes. The skin changes that are seen (hyperpigmentation and eczema) are caused by chronic venous insufficiency (CVI).

Figure 8. Furunculosis.

Figure 9. Lichen planus.

Using a wash and cream that is an emollient and antimicrobial combined can improve congestion and reduce the incidence of Malassezia furfur (M. furfur) (Djokic-Gallagher et al, 2012). This type of wash can reduce the bacterial activity of the virulent Panton-Valentine leukocidin (PVL; cytotoxin produced by Staphylococcus aureus that causes leukocyte destruction and tissue necrosis) in Staphylococcus aureus, which is often a persistent problem in the longevity of leg ulcers. When in doubt, either as a first option or a last resort, healthcare professionals should try it and see if this type of treatment can help. A slight shift in treatment can sometimes aid healing.

ERYTHEMA NODOSUM AND LICHEN PLANUS

Erythema nodosum is an erythematous eruption often associated with drug reactions or infections characterised by inflamed nodules that are usually tender, multiple and bilateral. These nodules are located mostly on the shins, but sometimes on the thighs and forearms. They undergo characteristic colour changes ending in temporary areas of bruising (Kumar and Clark, 2005). The condition is usually self-
limiting and subsides in three to six weeks without scarring or atrophy. Long-term treatment may involve the use of oral steroids, which in itself can predispose patients to skin thinning, and osteoporosis is also among other side-effects. It is wise to ensure that there are no underlying causes for this condition, such as new medications (sulpha-related drugs, birth control pills, oestrogens), strep throat, fungal diseases, infectious mononucleosis, sarcoidosis, Behcet’s disease, inflammatory bowel diseases (Crohn’s disease and ulcerative colitis), or normal pregnancy.

Lichen planus, a separate condition, is an inflammatory,itchy disease of the skin and mucous membranes that can be generalised or localised. Distinctive purple, flat-topped papules are seen generally on the trunk of the body and the flexor surfaces. The lesions may be discrete or join up to form plaques and the cause is unknown. Figure 9 shows the hard blistering which should be differentiated from sudden onset blisters, which tend to be filled with fluid and can be misdiagnosed as psoriasis, a contagious skin disease or a sexually transmitted infection (STI).

PSORIASIS

Psoriasis tends to be an unsightly, scaly rash that is not infectious (Figure 3). There may be a genetic predisposition within families that may or may not appear. Possible causes include stress, viral infections, alcohol abuse and occasionally as a side-effect of taking drugs, such as lithium.

Clinicians should check the patient’s nails, as they are often affected with pitting and separation from the nail bed. Types of psoriasis include chronic plaque, flexural, guttate — which follows six weeks after a throat infection, erythodermic and pustular (which is more common in people who misuse alcohol and drugs).

Emollients, coal tar ointments, vitamin D analogue creams, such as calcipotriol, and some steroid creams are helpful. For multiple patches for which cream application is impossible or dangerous, psoralen and psoralen and ultraviolet A (PUVA) light therapy may be the only solution. PUVA therapy is generally not a first-line treatment, except occasionally for guttate psoriasis.

The first patch of psoriasis may be caused by the Koebner phenomenon, i.e. developing psoriasis after an area has been inflamed or injured, such as a kick to the shin. Little is currently understood about this (Kumar and Clark, 2005), but it generally occurs with established psoriasis. Severe psoriasis may involve painful joints, as in psoriatic arthropathy, and may require systemic oral treatment. Patients should be referred to a specialist speedily when this is noted.

MEDICAL EMERGENCIES AND REFERRALS FOR RED FLAGS

A skin problem that is spreading or a patient with symptoms such as fever, loss of appetite, lack of thirst or loss of function, i.e. eyesight or hearing, should be treated as an emergency. The clinician’s instinct may play some part in this (Benner, 1984), and the family and patient history should be used to inform the clinician. An older patient who is usually fit and well but has suddenly deteriorated and has a rash needs essential and urgent medical attention. Examples of conditions that need emergency treatment are:

- Pemphigoid: a painful blistering rash (Figure 10) that may become infected and be accompanied with fever. It is an autoimmune disease and may be quite mild or chronic, but it can sometimes spread rapidly and causes problems. It requires treatment with steroids after confirming the condition: topical if localised, or oral if more widespread or not responding

- Ophthalmic zoster: this is a rash in the distribution of the ophthalmic division of the ophthalmic nerve – from the forehead to the tip of the nose. If a shingles rash affects the facial area, the patient needs to be seen by a specialist rapidly because any involvement of ear, eye or facial nerve is serious and will be difficult to resolve once established. Intravenous (IV) therapy will usually be started and patients need to be hospitalised. There is also a risk to the eye, which necessitates urgent referral to an ophthalmologist.

DIFFERENTIAL DIAGNOSES IN THE SKIN

When the diagnosis is unclear, it is important to remember to check the history and/or look at image databases for ideas. If there is concern regarding the severity of a rash, speak to the patient’s GP or consider calling Public Health England (PHE) for advice on management of notifiable diseases. These are listed in the British National Formulary (Joint Formulary Committee, 2014).

INVESTIGATIONS COMMONLY USED IN DETERMINING SKIN PROBLEMS

Some of the tests that patients may be referred for include nail sampling, use of a Wood’s lamp examination as most fungal infections will fluoresce, skin biopsies, patch testing and dermatoscopy (direct microscopy of the skin for malignant lesions).

Tests that can be performed include skin swabs and urine tests for diabetes; sending blister fluids for microbiology, culture and sensitivity; and taking bloods for serology, autoantibodies, human leukocyte antigen (HLA) typing and DNA analysis.
DISCUSSION

Those working in community settings are in an ideal position to promote patients’ health and to ascertain whether skin conditions are becoming more invasive, or they are changing and are a risk to life.

Clinicians should treat patients holistically and consider their general health, as well as the condition for which they are seeking treatment. This can help nurses to diagnose the disease or skin problem. An example would be an older patient who uses a new washing powder to handwash clothes and discovers a clearly demarcated rash to the hands and lower arms. This is most likely to be due to contact with a strong biological detergent rather than anything more sinister.

CONCLUSION

Some of the common skin conditions that community nurses may encounter have been presented here including allergic, infective, invasive and systemic problems. Seeking advice when a patient is deteriorating is essential — whether this advice is from the patient’s GP, local general practice nurse (GPN), a nurse practitioner or a colleague that has more experience of acute and chronic skin conditions. Expert advice may help in diagnosis and management. Good history-taking and a basic knowledge of skin lesions is needed, along with the ability to distinguish acute and emergency issues from chronic skin conditions. Online resources and specialist advice can help when clinicians are unsure. JCN

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