RACGP
Royal Australian College *of* General Practitioners

RACGP aged care clinical guide (Silver Book)

5th edition

Part A. Dermatology

General principles

- Ensure and maintain skin integrity wherever possible.
- Avoid contact with skin irritants and prolonged localised pressure.
- Encourage a good diet, including zinc, vitamins C and D and adequate protein, for support of skin barrier function and connective tissue health and cell repair.
- Maintain skin moisturisation with emollients.
- Systemic disease and medication reactions can first present with skin signs.
- Actinic (solar) damage is cumulative, so sun protection and skin cancer surveillance is important at all ages.

Practice points

Practice points	References	Grade
Use tools that may be beneficial in determining the effect of dermatological issues on the quality of life	4	Consensus-based recommendation
Grade the severity of specific illnesses to determine the intensity of treatments needed and the progress to recovery	5	Consensus-based recommendation
Reconsider the use of anticoagulants, nonsteroidal anti-inflammatory drugs (NSAIDs) and aspirin, as these worsen the bruising in older people	6	Consensus-based recommendation
Obtain a good history of past occupation and recreation that may point to long-term or ongoing exposure to environmental factors	2	Consensus-based recommendation
Consider that itch can be caused by medication or a sign of a systemic condition	8	Consensus-based recommendation

Use of moisturisers and symptom relief with cold compresses supplemented by antihistamines and treating underlying conditions are the mainstay of treatment of pruritus	8	Consensus-based recommendation
Thorough skin examination is the mainstay of the early prevention and detection of skin cancers, depending on the individual's sun exposure history and previous skin cancers	9	Consensus-based recommendation
Repair tears using the patient's own skin flap as a 'graft' where possible	11–14	Consensus-based recommendation
Always consider the need for biopsy of the wound edge and wound swab for microbiology if the wound or ulcer is clinically infected using the Levine technique	12, 15	Consensus-based recommendation
Use of barrier creams and ointments associated with reduction in causative factors are effective in the prevention of wounds and ulcers	15	Consensus-based recommendation
Use of pressure stockings and elevation of limbs can be effective in control, prevention and assist in healing varicose ulcers	17	Varying levels of evidence for different patient group
Use of emollients (moisturisers) are paramount and need to be applied frequently if allergen penetrates the dermis	13	Consensus-based recommendation
Always consider scabies when diagnosing and managing itch in older people, especially in residential aged care facilities	8	Consensus-based recommendation

Introduction

The skin is the largest organ of the body. Its function is critical as a barrier to trauma, external irritants and infection, and also as an indicator of internal illness through symptoms and signs related to the skin.[1]

The skin has multiple functioning components, and the effects of ageing can affect the skin's functioning and structural resilience. Changes through exposure to environmental damage and the effects of time and genetic makeup occur as an individual ages. The dermis and epidermis thin, elasticity and oils (sebum) are reduced, and sensation falls due to reduction in nerve endings.

Clinical context

Currently, it is commonplace for older Australians to show actinic damage effects in their skin and have an increased risk of developing skin cancers. It is hoped that as Australians reduce sun exposure via the public health measures currently in place, solar damage effects to their skin will become less prevalent in later generations of older people.

Melanocytes also tend to congregate in the basement layer of the epidermis as individuals age and pigment is produced in an uneven way. Seborrhoeic keratoses and lentigines, the so-called 'age', 'wisdom' or 'liver' spots, occur as people age.

Elasticity also falls with increased wrinkles and more 'sag' of the skin, with reduced skin return during traction. The skin appears more leathery and 'weather worn'; this is known as elastosis due to damage of collagen and elastin fibres. It is more common in sun-prone areas of the skin.[1]

It is important to note that aged skin has a reduced ability to sweat and less surface area of blood vessels. This causes a problem with heat exchange, and older patients are more prone to heat intolerance (heatstroke) as a result. Conversely, older people are also more susceptible to the cold with the thinning of subcutaneous fat. This highlights the importance of environmental awareness and controls for older people.

Women's skin tends to start drying, with reduction in sebum and oils in thinning epidermis, from the time of menopause; for men, this is delayed, but is a significant problem for those aged >70 years.[2]

As individuals age, an increasing number of benign and annoying lesions such as seborrhoeic keratoses, cherry angiomata, skin tags and hyperkeratoses (ie rough thick skin spots) are all more commonly found. The skin of older people tends to repair itself more slowly than those in younger age groups, and is dependent on nutritional status,

existing skin damage and vascular supply, which may be impaired. Underlying medical conditions (eg diabetes) can also contribute to this slower repair.

Racial groups

Skin damage with ageing occurs in all racial groups. Skin signs of ageing occur because of the passing of time (chronological ageing) and sun damage (actinic damage). Signs of ageing will occur even in the absence of sun exposure, and the contribution of sun damage is less obvious in racial groups with darker skin. Patients of darker complexion may manifest obvious ageing through loss of elasticity or areas of pigment variability that can be more subtle to discern. Fairer skin types (Fitzpatrick skin type 1) display more classical actinic damage and skin ageing.

The Fitzpatrick skin type of an individual is useful to consider when assessing the skin of older people (refer to Appendix 1).

Quality of life

Skin symptoms and manifestations may have a significant effect on an individual's sense of self-worth, self-esteem and social acceptance and behaviour. As with younger individuals, skin changes may cause significant depression, anxiety and social withdrawal, and should be acknowledged and treated not only at a skin and appearance level but also from a mental health perspective for best results. An 'effect on life' tool such as the Dermatology Quality of Life Index (DLQI) may be beneficial, especially in the community settling.[3] Grading severity of specific illnesses appropriately (eg PASI scores in psoriasis) helps to determine the intensity of treatments needed and the progress to recovery.[4]

Bruising

A common complaint among older people is how easily they bruise, often without recognised trauma. This is due to a loss of connective tissue and increasing blood vessel fragility, leading to less resistance to shearing forces and less resilience of the skin to knocks and scrapes. The result is a relatively more superficial and obvious bruise in the skin of older people. This is often worsened by the use of anticoagulants, nonsteroidal anti-inflammatory drugs (NSAIDs) and aspirin.[5]

Environmental factors

Environmental factors play an important role in the skin of older people, including the following:[6]

- Cumulative actinic exposure – especially ultraviolet (UV) exposure
- Smoking
- Exposure to irritant chemicals – for example, detergents, soaps and solvents
- Exposure to toxic chemical – for example, hydrocarbons, pesticides, arsenicals
- Contact with products that cause allergy – for example, fragrances, nickel, glues, some plants
- Low humidity – especially in heated residential facilities, contributing to skin dryness

It is therefore vital to obtain a good history of past occupation and recreation that may point to long-term or ongoing exposure to the factors listed above. Further limiting the exposure and treating with barriers is appropriate.[6]

Itch

Most older people will have some symptoms referable to their skin, most commonly dry skin and itch. Itch is an extremely common symptom in the older age group. Often, there is a simple explanation to the itch (eg dry skin, co-existent dermatitis). Always consider scabies when diagnosing and managing itch in older people, especially in residential aged care facilities (RACFs).[7] Itch can be caused by medication or be a sign of a systemic condition such as iron deficiency or underlying cancer. Causes of itch should be investigated.[8]

Senile pruritus is itch without rash or explanation in older people.

Moisturisers and symptom relief with cold compresses supplemented by non-sedating antihistamines, and treating underlying conditions, are the mainstay of treatment.[8,9]

In practice

Skin cancer

Skin cancers are the most common cancers in Australia, and general practice is the most common place for the diagnosis and management of these tumours. Skin cancers increase in frequency as individuals age.

Thorough skin examination is the mainstay of early prevention and detection of skin cancers, at intervals dependent on the individual's sun-exposure history and previous skin cancers. This reduces morbidity and complications associated with treatment. Dermatoscopy, if available, is helpful in diagnosing pigmented and vascular aberration.

Skin cancer management must be individualised to the patient, and the patient must appropriately consent if diagnostic or therapeutic procedures are to be undertaken. In all age groups, surgical treatment is the mainstay for cure; however, standard guidelines for treatment may not be appropriate for older patients. Treatment does need to be tailored to the patient's age, general health and wishes (non-curative treatment may be considered).

Keratinocyte

Keratinocyte cancers (ie squamous and basal cell carcinomas) are the most common indicators of significant sun damage and possible precursor (solar keratosis).[10] Treatment for these premalignant and malignant conditions is common in general practice, and the Cancer Council's National Health and Medical Research Council (NHMRC)-approved *Basal cell carcinoma, squamous cell carcinoma (and related lesions) – A guide to clinical management in Australia* is a good reference.

Melanoma

Melanoma is recognised with increasing age,[11] and the current treatment protocols are available through the Cancer Council's *Clinical practice guidelines for the diagnosis and management of melanoma*. Older individuals are especially at risk of in situ and thin melanoma in sun-damaged fields.

Melanoma treatment has progressed markedly in the past 10 years, and many patients are using biological therapeutics to produce lasting longevity in previously rapidly fatal illness states. However, these biologic agents do cause significant skin drying and hyperkeratosis, so good emollient use must be encouraged.

Wounds and ulcers

The skin of older people is less resilient and more prone to damage as they age. Shearing force in non-elastic skin results in tears and abrasions occurring much more commonly. Skin tears are commonplace in older people given that other intercurrent illnesses may affect balance and proprioception (eg Parkinson's disease, diabetes, cerebrovascular accident), leading to increased accidental trauma.

Repair of tears should use the patient's own skin flap as a 'graft', where practicable. After cleaning the area, where possible, the patient's skin flap should be laid back in place and needs to be held in contact with the wound bed with a firm dressing for several days. Deeper wounds must be assessed on their merits, and treatment is dependent on depth, cause, location on wound, venous and arterial competence, infection risk and general nutritional status.[12,13,14,15]

Decubitus or pressure ulcers need alertness for prevention in residents living in RACFs. Good nutritional status should be the aim, and good nursing care is paramount by:

- frequent repositioning of the patient
- pressure alleviation techniques (eg air cushions, beds)
- appropriate dressings with elimination of infection.

Always consider the need for biopsy of the wound edge and wound swab for microbiology if the wound or ulcer is clinically infected, using the Levine technique (refer to Appendix 2).[14,16] Cutaneous cancer may present as non-healing ulcers and should be considered in these circumstances.

Barrier creams and ointments associated with reduction in causative factors are effective in the prevention of wounds and ulcers.

Varicose or stasis changes and eczema associated with varicose veins may lead to ulceration through various mechanisms, including increased tissue pressure, fluid build-up and itch-scratch reactions with resulting trauma. The use of pressure stockings and elevation of limbs can be effective in control, prevention and assisting in healing, with varying levels of evidence for different patient groups.[17]

Loss of skin barrier function

Dry skin is common in older people. Skin dehydration and impaired barriers cause the symptom of itch, and can bring out dermatitis and eczemas in those who are susceptible to these conditions.

Increased allergen penetration to the dermis results in flares of contact allergies (eg nickel), but also exacerbates previous atopic or seborrhoeic eczema. These flares can require intensive treatment, and emollients are paramount and need to be applied frequently (up to every three hours in severe cases). Steroid creams and ointments need to be considered.[14]

Dry skin can trigger the 'itch-and-scratch' cycle, which predisposes to skin excoriation, abrasion and bacterial infections. Infestations with mites (eg scabies) are also possible, and specific investigation is needed to distinguish these infestations.

It is important to be aware of the public health implications of these potentially infectious conditions to carers, family members and/or other aged-care residents.

Allergic reactions and the skin

As with any age, systemic allergies may present with skin manifestations in older people. The risks of skin allergic manifestations increases in older patients on multiple drug therapies.

Drug allergies present with a broad range of skin manifestations ranging from non-specific morbilliform erythema or urticaria to the more severe erythema multiforme, Stevens–Johnson syndrome or toxic epidermal necrolysis.[18]

Systemic illness and the skin

Diabetes, liver disease, thyroid disease, connective tissue disorders, and autoimmune and vasculitic illnesses may all present with skin manifestations. Deficiency states (eg iron, zinc, vitamin C or B-group vitamins) and general malnutrition may present initially with skin signs.

Recognition of certain conditions (eg dermatomyositis, bullous pemphigoid) with their peak incidence in older people can lead to prompt diagnoses and effective treatment.

Paraneoplastic skin syndromes and their manifestations should also be considered in older people.

Necrobiosis lipoidica and acanthosis nigricans are not uncommon in those who have diabetes, and should be recognised. Difficult to control flexural or mucocutaneous candidiasis should raise the question of diabetes and zoster, and especially if severe or extensive, may indicate immune impairment.

Drug therapy in older people

Older people who are on multiple medications and those with chronic illness (especially renal impairment) are at increased risk of interactions with medication-induced and drug-induced skin reactions.

Some associations are obvious (eg urticaria with aspirin) or severe reactions (eg Stevens–Johnson syndrome to sulphur-based medications or allopurinol). For others, the cause is less obvious, such as a morbilliform hypersensitivity rash in a patient on multiple medications, where it can be difficult to identify the trigger. Careful history taking may assist in the definition of these reactions.

Some medications also cause problems with the skin because of their modes of action. For example, diuretics and statins may dry the skin; chemotherapy and immunosuppressants, because of reduced immune surveillance, increase skin cancer and infections.

Conclusion

Skin problems and symptoms are common in older people. The signs of skin ageing, sun damage and changes in how older skin reacts can alter how skin problems present and need to be considered. Older people are at increased risk of impaired heat regulation, increased infections, reduction in barrier functions and poor-healing wounds. Good nutrition with an adequately balanced diet is important in promoting good skin health. Skin protection, avoidance of irritants and moisturisation is key with the regular use of emollient lotions, creams and ointments. Skin moisturisation improves the skin-barrier function and improves quality of life by reducing itch and maintenance of skin integrity.

Appendix 1. Fitzpatrick skin types

Skin type	Typical features	Tanning ability
I	Pale white skin, blue/green eyes, blond/red hair	Always burns, does not tan
II	Fair skin, blue eyes	Burns easily, tans poorly
III	Darker white skin	Tans after initial burn
IV	Light brown skin	Burns minimally, tans easily
V	Brown skin	Rarely burns, tans darkly easily
VI	Dark brown or black skin	Never burns, always tans darkly

Appendix 2. Levine method swab culture[19]

1. Cleanse wound with normal saline
2. Remove/debride nonviable tissue
3. Wait 2–5 minutes
4. If ulcer is dry, moisten swab with sterile normal saline
5. Culture the healthiest-looking tissue in the wound bed
6. Do not culture exudate, pus, eschar or heavy fibrous tissue
7. Rotate the end of the sterile alginate-tipped applicator over a 1 cm2 area for five seconds
8. Apply sufficient pressure to swab to cause tissue fluid to be expressed
9. Use sterile technique to break tip of swab into collection device designed for quantitative cultures

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