Recognising the signs of skin cancer

Skin cancer is the most common cancer in the UK and its incidence is rising. Nurses need to be aware of the signs associated with skin cancer, and of up-to-date health promotion advice. Gill Godsell describes the aetiology of the different types of skin cancer and the key health promotion messages that help to reduce the risk of developing them.

**KEY WORDS**

Skin cancer   
Ultraviolet radiation   
Prevention

**REFERENCES**


Skin cancer is the most common cancer in the UK, with about 100,000 cases reported each year (UK Skin Cancer Working Party, 2001). There are three main types of skin cancer, which can be divided into two categories: non-melanoma (basal cell carcinoma and squamous cell carcinoma) and melanoma skin cancer. Basal cell carcinoma is the most common and accounts for about 80 per cent of all skin cancers. Malignant melanoma is the least common type of skin cancer, accounting for about five per cent of all skin cancers. However, it has a high mortality rate because of its aggressive nature (Krié et al, 1991).

**Basal cell carcinoma** Basal cell carcinoma (BCC) rarely metastasises but if left untreated can cause severe disfigurement (Buchanan, 2001). It was once considered a disease of older people, particularly men who had worked outdoors (Nicol, 1989). However, now many more young people are being diagnosed and women are affected at the same rate as men.

Exposure to ultraviolet radiation (UVR) is the main factor in developing BCC (Rhodes, 1995), although it can also occur in burn scars and skin damaged by ionising radiation (Buchanan, 2001).

The classic features of BCC are: a small raised lesion with a well-defined ‘pearly’ border; telangiectatic vessels (a localised collection of distended capillaries) overlying the lesion (Fig 1). The tumour is usually painless and slow-growing, and generally appears on sun-exposed skin such as the face, ears and hands (Nicol, 1989).

Surgical removal is the treatment of choice. If this is not possible, radiotherapy or photodynamic therapy may be offered (Godsell, 2002).

**Squamous cell carcinoma** The second most common skin cancer, squamous cell carcinoma (SCC) can metastasise if left untreated. Ninety per cent of SCCs occur on sun-exposed skin such as the face or hands (Braun-Falco et al, 1991). This carcinoma usually appears as a non-healing indurated lesion that may be crusty, scaly or ulcerated (Fig 2). Surgical removal is the treatment of choice (Braun-Falco et al, 1991).

Ultraviolet radiation (UVR) is the most important pathogenic factor (Rhodes, 1995), but other carcinogens – such as X-ray radiation, polycyclic hydrocarbons (such as tar, mineral oils, soot), chemicals and viruses – have also been linked to SCC (Buchanan, 2001). It can also occur in scars or severely traumatised skin, such as chronic ulcers or burns (Braun-Falco et al, 1991).

**Malignant melanoma** The most serious skin cancer, malignant melanoma (MM) often arises in a naevus, or as a new lesion. It is rare in children and most common in people over 75. It is the third most common cancer for 15-39-year-olds (Cancer Research UK, 2002).

Melanoma cells disseminate early and prognosis depends on tumour thickness on removal (Breslow, 1970). An early-diagnosed, thin, primary MM treated with adequate surgery has an excellent prognosis. However, for advanced MM prognosis is poor (Rhodes, 1995) and if it disseminates beyond the local lymphatic system it is incurable (Hersey et al, 1991).

The mnemonic ABCD can be used to remember the diagnostic features of early MM (Fig 3), as defined by the American Academy of Dermatology:

- Asymmetry;
- Border irregularity;
- Colour;
- Diameter.

There are four main types of cutaneous melanoma:

**Superficial spreading melanoma** is the most common, representing 75 per cent of all MM (Buchanan, 2001). If treated early, a favourable prognosis is expected. A change in its size, shape and colour are the major signs to look for, occurring over a few months rather than years (Rhodes, 1995).
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is then duplicated, leading to the formation of a malignant skin cells (Gilchrest et al, 1999), causing a mutation that may mutate and proliferate in later life.

Evidence also shows that sunlight damages the DNA in susceptible to malignant changes (Duthrie et al, 1999). The immune system (Novakovic et al, 2001), making it more immune to malignant changes (Duthrie et al, 1999).

Sunlight and skin cancer Much evidence on the link between UVR and skin cancer is circumstantial and provided by epidemiological studies (Melia et al, 2000). However, the site of most skin cancers indicates that sun exposure is a major factor (CRUK, 2002). BCC and SCC are linked to chronic sun exposure and MM is linked to acute sun exposure.

Sun exposure has been shown to suppress the skin’s immune system (Novakovic et al, 2001), making it more susceptible to malignant changes (Duthrie et al, 1999). Evidence also shows that sunlight damages the DNA in skin cells (Gilchrest et al, 1999), causing a mutation that is then duplicated, leading to the formation of a malignant tumour. Episodes of sunburn in childhood increase the risk of melanoma in later life (CRUK, 2002) because children’s skin contains a greater proportion of immature cells, which may mutate and proliferate in later life.

Risk factors Risk factors for skin cancer include:

- Celtic ancestry with fair skin that burns easily;
- Red/fair hair, blue eyes and freckles;
- A family history of melanoma;
- A history of childhood sunburn;
- Outdoor occupation or hobby;
- Living or have lived in a hot climate;
- Active seeker of a tan – from sunbathing or sunbeds.

Health promotion Experts believe that 90 per cent of non-melanoma skin cancer and two-thirds of melanomas may be attributed to excessive sun exposure (Fry and Verne, 2003). Health education is the key to prevention and can be approached using two main strategies.

Primary prevention This aims to cut the incidence of skin cancer by reducing the public’s exposure to the sun. The key message is that people should avoid sun exposure by following the advice below:

- Keep babies and infants out of the sun completely;
- Stay out of the sun between 11am and 3pm;
- Seek the shade whenever possible;
- Use suitable clothing as a sunscreen, such as long-sleeved shirts, broad-brimmed hats and sunglasses;
- Correctly apply a broad-spectrum sunscreen with a sun protection factor of at least 15 (25 for children) (Turner, 2002).

Secondary prevention This is aimed at early detection and removal, by ensuring that people know the signs of skin cancer and what to do if they notice them. If a suspect lesion is noticed, the person should see his or her GP, who will refer him or her to the local hospital if skin cancer is suspected.

In line with The NHS Cancer Plan (DoH, 2000), suspected skin cancers should be seen by a specialist within two weeks of GP referral. By 2005, there should be a maximum two-month wait from referral to treatment of all cancers, including skin cancers.

Nurses have an important role in reducing the incidence of skin cancer. Primary care nurses are ideally placed to deliver health education on skin cancer and sun safety. Posters can be displayed in patient waiting areas, sun protection can be discussed while undertaking routine nursing duties and nurses can look for suspicious lesions that may need referral to a GP.

Nodular melanoma is the most aggressive and presents as a dome-shaped nodule with a history of rapid change in colour, size and/or shape. Prognosis is generally poor as the tumour is usually thick at the time of diagnosis. Some lesions do not contain any pigment and appear as ulcerated inflamed lesions.

Acral melanoma is a rare melanoma that occurs on the hands or feet. It appears as a flat, pigmented lesion ranging from light tan to brown or black. The border is often irregular. Change tends to occur over many years and the prognosis is usually good (Breslow, 1970).

Acral melanoma is a rare melanoma that occurs on the hands or feet. It appears as a dark brown or black lesion on the palm or sole – or under the nail as a linear pigmented streak. The prognosis for this type of melanoma is poor (Buchanan, 2001).

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