Skin cancer screening

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Executive summary

Health Council of the Netherlands

Skin cancer is the most common type of cancer in the Netherlands and has the largest number of new cases per year of all cancer types. As part of the implementation of the Diertens et. al motion in the House of Representatives, the State Secretary for Health, Welfare and Sport (VWS) has asked the Health Council of the Netherlands to provide an opinion on skin cancer screening and, in the event that a population-wide screening programme should not prove to be appropriate, to provide an opinion on potential improvements to early skin cancer detection in the current healthcare system. The Committee on Population Screening of the Health Council of the Netherlands (Gezondheidsraad) has considered the issues.

Types of skin cancer and healthcare

Excessive exposure to sunlight and sunburn in combination with a light skin tone are the principal risk factors for skin cancer. Behaviour can therefore significantly reduce the risk of skin cancer (e.g. not staying in the sun for long periods of time, covering the skin and using a high factor sun cream). The most common types of skin cancer are basal cell carcinoma (BCC), squamous cell carcinoma (SCC) and melanoma. BCC is the most common type, particularly in the elderly. This type of cancer seldom metastasises and deaths from BCC are virtually non-existent. Metastasis is likewise uncommon in SCC and the survival rate is 95% and 90% 5 and 10 years after diagnosis respectively. Melanomas are the rarest type, but metastasise the fastest and are characterised by a lower survival rate, i.e. 91% 5 years after diagnosis and 86% 10 years after diagnosis. The care pathway for people with a suspicious skin lesion usually starts at the general practitioner, who carries out a risk assessment and will either treat the lesion or refer the patient to a dermatologist. People suspected to have a familial or hereditary predisposition to melanoma are offered a periodic skin examination and genetic testing.

Screening criteria

The committee based its considerations on the criteria that apply to responsible screening. First and foremost, there must be a significant health problem. In view of the large number of cases of skin cancer, the committee believes that this is the case, although the disease burden is relatively low and the survival rate for people with suspicious lesions is high with the current level of detection. However, there is no solid evidence that a population-wide skin cancer screening programme would be effective (the fourth criterion of the WHO 2008) and that the benefits of a screening programme have been established and that they outweigh the risks. The added value of a population screening

programme is expected to be limited, given that many cases are already detected at an early stage and that the disease burden and mortality are relatively low. The limited benefit is offset by risks in the form of false positive and false negative results, overdiagnosis and overtreatment.

At present, it is not known to what extent the available methods for assessing suspected skin abnormalities and diagnosing skin cancer are valid and sufficiently reliable to screen the general population for skin cancer.
The dermatoscope (a tool used to assess the skin) is effective in people with symptoms, however it is unknown to what extent this is also the case in people without symptoms. There are emerging developments in the field of artificial intelligence, such as for apps for suspicious skin abnormalities. However, these require still more development and research before they can actually be significant in the early detection of skin cancer.

Opinion

The committee recommends that the Minister should not introduce a national skin cancer screening programme, but instead focus on information provision and fostering behavioural change (protection against UV radiation).
Based on current scientific knowledge, skin cancer screening does not meet the criteria for responsible screening. Although there is an important health problem, the usefulness of screening has not been established: there is insufficient evidence to support a favourable benefit-risk analysis of a population screening programme. At present, it is not known to what extent the available methods for assessing suspected skin abnormalities and diagnosing skin cancer are valid and sufficiently reliable to screen the general population for skin cancer.
The care pathway for people with (suspected) skin cancer in the Netherlands is of good quality.

The Health Council of the Netherlands, established in 1902, is an independent scientific advisory body. Its remit is “to advise the government and Parliament on the current level of knowledge with respect to public health issues and health (services) research...” (Section 22, Health Act).
The Health Council receives most requests for advice from the Ministers of Health, Welfare and Sport, Infrastructure and Water Management, Social Affairs and Employment, and Agriculture, Nature and Food Quality. The Council can publish advisory reports on its own initiative. It usually does this in order to ask attention for developments or trends that are thought to be relevant to government policy.
Most Health Council reports are prepared by multidisciplinary committees of Dutch or, sometimes, foreign experts, appointed in a personal capacity.
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