Please, sir, pull down your socks!

Intern Emerg Med (2007) 2:287–290
DOI 10.1007/s11739-007-0079-x

PHYSICAL EXAMINATION

Please, Sir, pull down your socks!

D. Bonucchi • J. Piattoni • F. Ravera • A.M. Savazzi
G. Cappelli • N. Pimpinelli • P.A. Modesti

D. Bonucchi (✉) • J. Piattoni • F. Ravera
A.M. Savazzi • G. Cappelli
Nephrology, Dialysis and Renal Transplantation
Policlinico Hospital
Via del Pozzo 71
I-41100 Modena, Italy
e-mail: bonucchi.decenzio@policlinico.mo.it

N. Pimpinelli
Department of Dermatological Sciences
University of Florence Medical School, Florence, Italy

P.A. Modesti
Department of Critical Care Medicine and Surgery
University of Florence
Florence, Italy

Published online: 23 November 2007

Case report

D. Bonucchi, J. Piattoni, F. Ravera, A.M. Savazzi, G. Cappelli

A 48-year-old male patient presented at the regular follow-up visit seven months after a successful kidney transplant. After discussion of blood chemistries with the doctor, the patient underwent a physical examination. As usual, he unbuttoned his shirt and undid his trouser belt. Inspection of the limbs, after pulling up his trousers, confirmed the presence of ankle oedema; the graft was quite firm, with no murmurs in the area. Blood pressure was 140/80 mmHg.

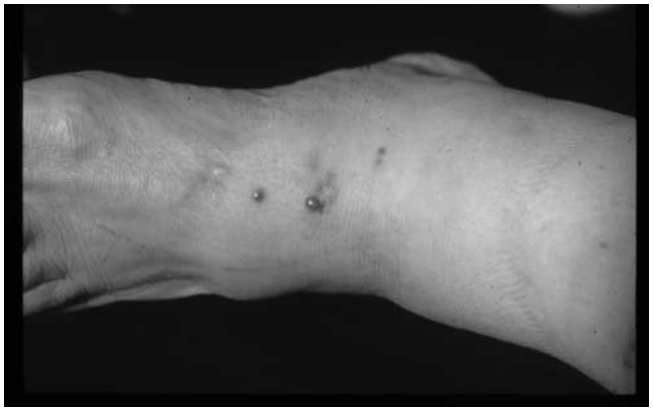

Fig. 1 Two nodular lesions of Kaposi's sarcoma

After leaving the examination bed, he sat down once again and the doctor commented on the result of the last early cytomegalovirus antigen (p65) test, again positive irrespective of the course of ganciclovir administered the previous month. A further course of antiviral drug was scheduled, then the patient was dismissed.

At this point, while the patient was crossing to the door, the young fellow stopped the patient: "Please, Sir" – he said – "pull down your socks!". Two little violet nodules appeared on the upper surface of the left foot (Fig. 1). "Here you are!" – said the fellow as a good new. After the disclosure of the two nodules, the examination of regional lymph nodes (another very frequently skipped phase of physical examination) becomes mandatory. In our patient no nodes were found at the groin.

Some days after, a punch biopsy confirmed a Kaposi's sarcoma (KS) at the plaque stage. Immunosuppression was lightened and the sarcoma regressed and finally disappeared. Finally, his graft function is still stable after reduction of immunosuppressive therapy.

Soon after the surgery his immunosuppressive treatment (cyclosporine, azatioprine and steroids) had to be tapered because of toxicity of calcineurine inhibitor and sub-clinical cytomegalovirus infection. Nevertheless, two months after the graft, he suffered from a urinary tract infection by *K. pneumoniae*, treated with amoxicillin clavulanate.
Renal function was only sub-optimal due to an unfavourable match between donor kidney and patient body size; serum creatinine nadir was 2 mg/dl (38.1 ml/min calculated glomerular filtration rate).
The occurrence of different infections suggested over-immunosuppression. His sexual profile was not investigated further.

As written in medical texts, lesions of KS are characteristic and are not difficult to diagnose [1], but it is necessary to be aware of their occurrence in a specific clinical setting.

Comment

N. Pimpinelli, P.A. Modesti

The present report stresses two main points. The first is the obvious, possibly negative implications of a selective, disease-oriented, physical examination, often forced by time. The second is that diseases such as KS, often perceived as typical of AIDS, can be shared by other conditions of acquired immunodeficiency, particularly organ transplants. KS is a relatively rare disease, yet it may cause

additional immunosuppression, In addition, immunodeficiency can also raise the incidence of more harmful skin cancers, e.g., melanoma (Table 1), whose detection clearly relies on a careful and complete clinical skin examination.

The incidence of skin cancer is increasing. In particular, based on rates from 2002–2004, the lifetime risk of developing melanoma is 1.72%, that is 1 of 58 men and women born today will be diagnosed with melanoma of the skin at some time during their lifetime [2]. The melanoma incidence continues to rise overproportionally in men aged >50 years [3–5], and 0.88% of men will develop melanoma of the skin between their 50th and 70th birthdays compared to 0.51% for women [2].

Because melanoma usually begins on the surface of the skin, it often can be detected at an early stage with a systemic skin examination by a trained health care professional. Checking the skin regularly for any sign of disease increases the chance of melanoma early detection. In particular, melanomas detected during a deliberate skin examination were thinner than those detected incidentally [6]. Although there is at present no conclusive evidence that screening for melanoma will reduce its morbidity and mortality, the US Preventive Task Force (USPTF) describes screening as the most promising strategy, especially for older people [7]. Screening for melanoma has the potential to improve early diagnosis. Early diagnosis may in turn result in improved outcome because primary tumour thickness is the strongest predictor of prognosis and guides therapy [8]. Indeed, the 5-year survival rate for stage I melanoma is 91–95%; while it dramatically drops to 7–19% in stage IV [9].

In common clinical practice, melanoma is often detected by the patient himself. A population-based study performed in Australia [6] revealed that 44% of melanomas were detected by the patients themselves, with physicians and partners of the patient detecting 25.3% and 18.6%, respectively [6]. However, in the same study melanomas detected by the patient or other layperson were more likely to be thicker (>1 mm) than those detected by physicians [6]. To improve skin self-examinations (SSE), the ABCD acronym was developed, alerting patients to asymmetry, border irregularity, colour variation and diameter (greater than 6 mm) of pigmented lesions that are at risk for being melanomas. Taken together, these criteria have proven to be reasonably sensitive and specific, although exceptions exist, such as amelanotic melanomas or melanomas less than 6 mm in diameter. Abbasi et al. [10] recommended adding an "E" for "evolution", denoting a change in the size, shape, surface, colour or symptoms of the lesion. Despite this, skin cancer primary and secondary prevention practices are performed less frequently than other preventive practices, such as breast examinations, Papanicolaou tests, pelvic examinations and rectal examinations [11]. Most patients, including those in high-risk groups, do not receive skin examinations as part of routine primary care [12]. Physician attitudes toward skin cancer screening and prevention, as well as a lack of training, knowledge and clinical skills in the examination, have been identified as barriers in clinical practice [11]. Because most patients with skin lesions are seen by non-dermatologists [12], all primary care physicians should have basic clinical education in the diagnosis and evaluation of suspicious skin lesions, starting in medical schools and continuing in their CME programmes. Time spent in a dermatology clinic was found to be a predictor of increased skill level, suggesting that there is a role for dermatologists in teaching and promoting this clinical skill, doubtless complemented by the availability of patients with suspicious lesions. On the basis of the same data, even a single session (1–5 h) spent in a dermatology clinic can dramatically increase student practice opportunities and skill levels [13]. However, exposure to principles of primary and secondary prevention of skin cancer could also be incorporated into other clinical rotations, such as family practice, paediatrics and general surgery [14]. In an ideal world, after a systemic skin examination, suspicious pigmented lesions would then be evaluated by a dermatologist, with clinical examination possibly aided by non-invasive techniques such as dermoscopy [15]. The issue of a potential workforce shortage of dermatologists has been addressed [16].

Table 1 Risk factors for melanoma

Personal history of melanoma
Family history of melanoma
Dysplastic nevus (atypical mole) syndrome
Many common moles (more than 50)
History of severe, blistering sunburns (especially in infancy)
Fair, freckled, always burning/never tanning skin (Fitzpatrick's type I skin)
Weakened immune system

Primary care physicians are in a unique position to perform cancer screenings. In their survey of 380 primary care physicians, Geller et al. [17] reported that nearly 60% routinely performed full-body examinations of high-risk patients. The major reason why such exams were not performed was lack of time. One can only empathise with a primary doctor who also has to screen for malignancies of the breast, colon, lung, cervix or prostate, etc. and still finds the time for a thorough skin examination. However, primary physicians could also teach the patient how to perform SSE. Screening in the form of a total body skin self-examination is non-invasive, requires no special equipment, and is reasonably cost-effective compared with other conventional cancer screening strategies [18].

Who should be screened?

Visual examination of the skin in asymptomatic individuals might cause overdiagnosis leading to the detection of bio-

Table 2 How to do a skin self-examination

1. After a bath or shower, stand in front of a full-length mirror in a well lit room. Use a hand-held mirror to look at hard-to-see areas.
2. Begin with the face and scalp and work downward, checking the head, neck, shoulders, back, chest and so on. Be sure to check the front, back and sides of the arms and legs. Also, check the groin, the palms, the fingernails, the soles of the feet, the toenails and the area between the toes.
3. Be sure to check the hard-to-see areas of the body, such as the scalp and neck. A friend or relative may be able to help inspect these areas. Use a comb or a blow dryer to help move hair so you can see the scalp and neck better.
4. Be aware of where your moles are and how they look. By checking your skin regularly, you will become familiar with what your moles look like. Look for any signs of change, particularly a new black mole or a change in outline, shape, size, colour (especially a new black area) or feel of an existing mole. Also, note any new, unusual, or "ugly-looking" moles. If your doctor has taken photos of your skin, compare these pictures with the way your skin looks on self-examination.
5. Check moles carefully during times of hormone changes, such as adolescence, pregnancy and menopause. As hormone levels change, moles may change.
6. It may be helpful to record the dates of your skin exams and to write notes about the way your skin looks. If you find anything unusual, see your doctor right away. Remember, the earlier a melanoma is found, the better the chance for a cure.

logically benign disease that would otherwise go undetected. Complete skin examination should be suggested to subjects with known risk factors for melanoma including personal and/or family history of melanoma, great number of naevi, light phototype (fair or red hair, blue or green eye colour and skin that never tans) and history of sunburns (Table 1) [19, 20]. Very recently, the importance of five main factors independently involved in the likelihood of suspected melanoma have been identified (HARMM: History of previous melanoma, Age over 50, Regular dermatology consultation absent, Male sex, Mole changing) [5]. Targeted screening toward those aged >50 years has been suggested as a possible way to increase its cost-effectiveness [5, 21, 22]. Although men aged >50 years make up 44% of those patients with a confirmed melanoma within open access community screening programmes, excisions are more commonly performed on patients aged <50 years compared with patients aged >50 years within general practice [23]. It has to be considered that older men frequently have lesions in difficult-to-see areas such as the scalp and the back, and therefore may be limited in their ability to notice any new or changing lesions themselves [5, 24].

Which factors facilitate self-screening?

Having had a previous clinical examination by a physician was found to be the factor most strongly related to future screening intention. In addition, several attitudinal factors (perceived susceptibility, giving skin checks a high priority) as well as a previous history of keratinocyte carcinoma were also associated with intention to screen [25].

How to perform skin self-examination

The National Cancer Institute gives patients specific suggestions for performing a SSE [26] (Table 2).

People who think they have atypical nevi, as well as those with any new, changing, or "ugly-looking" moles, should point them out to the doctor.

Consequences of a screening programme

A community-based randomised screening programme was reported to induce behaviour change in men aged >50 years by increasing their rate of whole-body clinical skin examinations 4-fold, and the rate of SSEs 2-fold [27]. Therefore doctors may effectively change the skin-screening behaviour of their patients by extending them the possibility to perform the first step of physical examination.

References

1. Calabresi P, Shein PS (1993) Medical oncology, 2nd Edn. McGraw-Hill, Inc
2. Ries LAG, Melbert D, Krapcho M et al (eds) SEER Cancer Statistics Review, 1975–2004. National Cancer Institute, Bethesda, MD. http://seer.cancer.gov/csr/1975_2004/. Based on November 2006 SEER data submission, posted to the SEER website, 2007. http://seer.cancer.gov/statfacts/html/melan_print.html (accessed 30 August 2007)
3. Vinceti M, Bergomi M, Borciani N et al (1999) Rising melanoma incidence in an Italian community from 1986 to 1997. Melanoma Res 9:97–103
4. Swetter SM, Geller AC, Kirkwood JM (2004) Melanoma in the older person. Oncology (Huntingt) 18:1187–1196; discussion 96–97
5. Goldberg MS, Doucette JT, Lim HW et al (2007) Risk factors for presumptive melanoma in skin cancer screening: American Academy of Dermatology National Melanoma/Skin Cancer screening program experience 2001–2005. J Am Acad Dermatol 57:60–66
6. McPherson M, Elwood M, English DR et al (2006) Presentation and detection of invasive melanoma in a high-risk population. J Am Acad Dermatol 54:783–792
7. United States Preventive Services Task Force (2001) Screening for skin cancer: recommendations and rationale. Am J Prev Med 20:44–46
8. Karakousis CP, Emrich LJ, Rao U (1989) Tumor thickness and prognosis in clinical stage I malignant melanoma. Cancer 64:1432–1436
9. Chen SC, Pennie ML, Kolm P et al (2006) Diagnosing and managing cutaneous pigmented lesions: primary care physicians versus dermatologists. J Gen Intern Med 21:678–682
10. Abbasi NR, Shaw HM, Rigel DS et al (2004) Early diagnosis of cutaneous melanoma: revisiting the ABCD criteria. JAMA 292:2771–2776

11. Oliveria SA, Christos PJ, Marghoob AA, Halpern AC (2001) Skin cancer screening and prevention in the primary care setting: National Ambulatory Medical Care Survey 1997. J Gen Intern Med 16:297–301
12. Feldman SR, Fleischer AB (2000) Skin examinations and skin cancer prevention counseling by US physicians: a long way to go. J Am Acad Dermatol 43:234–237
13. Carli P, De Giorgi V, Crocetti E et al (2005) Diagnostic and referral accuracy of family doctors in melanoma screening: effect of a short formal training. Eur J Cancer Prev 14:51–55
14. Wolfson P (2000) Teaching prevention in surgery: is it an oxymoron? Acad Med 75[Suppl]:S77–S84
15. Carli P, de Giorgi V, Chiarugi A et al (2004) Addition of dermoscopy to conventional naked-eye examination in melanoma screening: a randomized study. J Am Acad Dermatol 50:683–689
16. Resneck J Jr, Kimball AB (2004) The dermatology workforce shortage. J Am Acad Dermatol 50:50–54
17. Geller AC, O'Riordan DL, Oliveria SA et al (2004) Overcoming obstacles to skin cancer examinations and prevention counseling for high-risk patients: results of a national survey of primary care physicians. J Am Board Fam Pract 17:416–423
18. Freedberg KA, Geller AC, Miller DR et al (1999) Screening for malignant melanoma: a cost-effectiveness analysis. J Am Acad Dermatol 41:738–745
19. Marghoob AA, Kopf AW, Rigel DS et al (1994) Risk of cutaneous malignant melanoma in patients with "classic" atypical-mole syndrome. A case-control study. Arch Dermatol 130:993–998
20. Briollais L, Chompret A, Guillod-Bataille M et al (2000) Patterns of familial aggregation of three melanoma risk factors: great number of naevi, light phototype and high degree of sun exposure. Int J Epidemiol 29:408–415
21. Burton RC, Howe C, Adamson L et al (1998) General practitioner screening for melanoma: sensitivity, specificity, and effect of training. J Med Screen 5:156–161
22. Girgis A, Clarke P, Burton RC, Sanson-Fisher RW (1996) Screening for melanoma by primary health care physicians: a cost effectiveness analysis. J Med Screen 3:47–53
23. English DR, Del Mar C, Burton RC (2004) Factors influencing the number needed to excise: excision rates of pigmented lesions by general practitioners. Med J Aust 180:16–19
24. Hanrahan PF, Hersey P, D'Este CA (1998) Factors involved in presentation of older people with thick melanoma. Med J Aust 169:410–414
25. Janda M, Youl PH, Lowe JB et al (2004) Attitudes and intentions in relation to skin checks for early signs of skin cancer. Prev Med 39:11–18
26. Available at: http://www.mpip.org/guide/suspindex.html (accessed 30 August 2007)
27. Janda M, Youl PH, Lowe JB et al (2006) What motivates men age > or =50 years to participate in a screening program for melanoma? Cancer 107:815–823