

BMJ Case Reports

How to write a Global Health case report

The title should be straight forward – nothing cryptic

TITLE OF CASE *Do not include "a case report"*

Ramifications of minority populations with poor medical education and screening: an extensive acral melanoma

150 WORD SUMMARY *Focus the summary on the case or the Global Health problem that you want to discuss. You may wish to give an indication of the severity of the case or the scale of the problem*

An elderly Samoan man presented, after a two year holistic self-treatment period on his home island, with a painful, hyperpigmented mass on his left heel. Physical exam revealed a black, friable tumor with necrotic tissue and superficial ulcerations with no other associated symptoms. Further work up revealed that the mass was invasive and treated with resection. A final diagnosis of acral-lentiginous melanoma; stage T4b was made. Poor access to care and screening services are large barriers to care for minorities and patients of low socioeconomic status. Once access is obtained, however, it does not guarantee patient compliance. Healthcare practices often clashes with societal beliefs, therefore, patient education regarding their disease and its possible progression, along with treatment options are important. Furthermore, lack in the ethnic diversity of physicians contributes to low cultural competency amongst their patients resulting in poor communication and low patient satisfaction of care.

CASE PRESENTATION *Explain the relevant features of the case in sufficient detail so that someone in another country would have a good understanding of who you are describing. Go back to the history of the problem, and forward to the outcomes that have resulted*

This may be further anonymised. Exact age and ethnic origin are not essential.

An 82 year old Samoan man, skin phototype V, **presented with left heel pain due to a large, exophytic, hyperpigmented, polypoid mass**. His initial presentation to the Dermatology Clinic was two years prior and was seen for a small, dark macule; but the patient elected to self-medicate holistically over this time on his home island until his heel pain caused his return. Physical exam revealed a lesion consisting of black, necrotic nodules and friable granulation tissue along with ulcerations and purulent/serosanguinous drainage. At the base of the lesion was a hyperpigmented, asymmetrical macule with nodularity (figure 1). The man had no other associated symptoms and no lymphadenopathy.

Describe the clinical reason that the patient first presented and give the clinical details in the usual way, as per a standard clinical case report.

An MRI noted a 9x7cm lobulated; exophytic left heel soft tissue mass with invasion into the fat pad, but no other tissue invasion or bone erosion. Biopsies from the medial and plantar surface of the macular lesion showed marked pigment deposition throughout all levels of the epidermis and into the superficial dermis (figure 2). The histopathologic findings also demonstrated lentiginous proliferation of atypical melanocytes associated with irregular epidermal acanthosis along with prominent pagetoid spread of atypical intraepidermal melanocytes (figure 3). Atypical melanocytes were noted at dermal papillae tips, but it was difficult to discern any definitive invasion into the dermis. These initial findings suggested a diagnosis of malignant melanoma in-situ, acral lentiginous-type along with a vertical growth phase resulting in an extensive

nodule. Although definitive features of invasive melanoma were not identified, given the patient's history, small sample size of tissue, and lack of biopsies from the fungating mass itself; it was felt that tumor excision was the most appropriate treatment.

A sentinel node biopsy was negative and a below the knee amputation was completed. Gross examination of the prosection revealed clear margins and findings of a variably pigmented (white to jet black) lesion with a focal area of fungating tumor measuring about 9x7x3cm overall. Adjacent to this fungating mass, covering approximately half of the lateral aspect of the foot, was an ill-defined, gray-blue discoloration measuring 11x8cm. Finally, located 0.4cm medially from the variably pigmented lesion and grossly separate from the main lesion, was a well-demarcated, slightly firm, jet black lesion measuring 0.5x0.5x0.2cm. Microscopic findings of the fungating mass revealed superficial ulceration and an underlying multinodular, heavily pigmented mass with gross extension into the adjacent adipose tissue that measured 3.2cm Breslow depth. Additional histopathologic findings of the mass and lesions were consistent with biopsy results as well as demonstrating invasion into the dermis and subcutaneous tissues. Midway through the dermis, there was prominent regression that was indicated by tumoral melanosis and fibrosis. Deeper to this, the tumor extended into the subcutaneous tissue without pigmentation supported by findings of marked cytologic atypia that included pleomorphism, abnormal chromatin patterns, and atypical mitotic figures (figure 4). The mitotic count was 15 per square millimeter with hot spot method. There was no definitive lymphovascular invasion or perineural invasion identified. Acral lentiginous melanoma, stage T4b, was the final diagnosis (figure 5).

Simply list the social determinants of your patient's health. These may be anything from access to health services, education, transport facilities and where they live to socioeconomic status, employment, political stability of their country or cultural aspects that affect health.

Each of these is discussed in more detail in the section below.

This section requires a comprehensive literature review and is NOT a summary of the literature.

Global Health problems are difficult to solve. Solutions must be prioritised and be appropriate to the context of the patient. This requires real analysis of the problems, not simply a summary of the evidence.

The problem you describe in the case presentation is a global one. Therefore, the literature must reflect the global incidence, global significance, global evidence and potential global solutions.

GLOBAL HEALTH PROBLEM LIST *Just list the problems raised in the case. These will be discussed more precisely in the section below*

- **Minorities with darker skin tones are at higher risk for acral melanomas.**
- **Minorities and those of low socioeconomic status (SES) usually present with advanced disease.**
- **Minority patients and those of low SES have decreased access to care due to multifactorial barriers.**
- **Poor secondary preventative medicine in low SES populations.**
- **Poor diversity among healthcare providers results in decreased cultural competency**

GLOBAL HEALTH PROBLEM ANALYSIS *The problem analysis directly addresses each problem in your case that needs attention to achieve a better health outcome for the patient. This should be a well-researched and balanced account. Find and appraise all the relevant medical, epidemiological and socio-political literature. Explaining missing epidemiological data is important in the appraisal of the literature. Make sure you discuss all the relevant aspects of the case, including important anthropological, cultural and community issues*

According to a report done in California, Native Hawaiians and Pacific Islanders (NHPI) were one of only two racial groups where the leading cause of death was cancer and above the national average.[1] Acral lentiginous melanomas make up the most common form of melanoma in dark-skinned individuals,

ranging from 29%-72%, with a median age of onset of 65, and often result in a higher lethality rate due to misdiagnoses in favor of diagnosing more common diseases.[2] Minorities with darker skin tones places them at a higher risk for acral melanomas.[3] Additionally, minorities and those of low socioeconomic status (SES) usually present with thicker lesions and more advanced disease leading to a higher mortality rate.[3-5]

Poorer health outcomes in low SES populations are likely due to poor secondary prevention in low SES populations, such as access to physician skin screening services and patient education of harmful melanocytic lesions.[3,4] One study found that women and younger patients tend to seek out medical screening services more often than their counterparts.[6] Another study revealed that low-SES patients generally have inadequate knowledge of their own medical condition, tend to have a high school education or less, and have difficulties arranging transportation; contributing to care barriers.[7] Meanwhile, those of high SES are generally more educated with a larger fund of medical knowledge, i.e. skin changes can be an indication of skin cancer.[5] With this knowledge, patients of high SES tend to recognize any skin changes when they self-screen and obtain medical treatment earlier than lower SES patients.[5]

Our patient, being an elderly gentleman from a remote Pacific island, supports this notion of increased wait time in seeking preventative services in addition to incurring barriers to his own care, to include proper understanding and knowledge of his disease and the vast distance traveled in order to obtain proper, specialty care. Rural and isolated populations have very similar characteristics when speaking about access to care. Several studies show that, historically, these areas have poor access to care mainly due to the vast travel distance, time, lack of specialty care, and financial burden to obtain healthcare services; with larger distances correlating to infrequent doctor visits, decreased use of preventative services and decreased routine medical follow ups.[8-10]

Multiple studies have shown that having a usual source of care (person or place where one receives healthcare) improves preventative medical screening services and decreases health disparities; however, this is often not available to minorities.[7,11-13] Language proficiency, insurance availability, time away from work, low income combined with out-of-pocket expenses, and even lack of citizenship are some barriers experienced by minorities that prevent them from obtaining a usual source of care; thus creating health disparities and poorer overall health.[1,14,15]

Of these, insurance availability is likely the biggest barrier. Having health insurance decreases health disparities among high and low SES groups by opening doors to preventative and primary care while lowering the overall cost.[13,15,16] Though many uninsured minorities are eligible for insurance, they do not sign up for it often due to lack of awareness about the benefit or have limited English proficiencies;[11] though a California study showed a high, 88%, English proficiency among NHPI.[1]

Another patient barrier to care is the lack of cultural understanding or competency by the physician. Generally, physicians withhold more clinical information from minority patients, which often leads the patient to a feeling of being left out of the medical decision-making process of their own care.[11] Typically, the ethnic makeup of physicians does not reflect the diversity of their patients.[1] Due to this asymmetry, there is a strong sense within each ethnic community that the physician is not aware of popular cultural alternative/holistic medicine therapies.[11] It is plausible that a Samoan provider would have been able to relate better to our patient at an earlier point of care, understand his concerns and desires to try a homeopathic treatment, and further educate the patient about his advanced disease and need for modern medical treatments, thus leading to a better outcome.

Often with differences in cultural background along with language comprehension, there is a breakdown in communication that strains the physician-patient relationship that leads to decreased trust in the physician, poor quality of care due to patients' lack of following physician recommendations, and poor interactions and misunderstandings that lead to decreased primary care visits and decreased use of preventative services.[11] A more diverse and/or engaged healthcare team builds greater cultural competency and provides high-quality care to all patients; there is better communication between the two parties which leads the patient to a more comprehensive understanding of their particular condition and treatment options which creates a stronger, patient-centered interaction that lowers discriminatory perceptions and increases patient care satisfaction.[1,11]

LEARNING POINTS/TAKE HOME MESSAGES 3 to 5 bullet points – this is a required field and should be directly relevant to the Global Health issues being discussed

- **Acral melanoma rates are increased in minority populations.**
- **The most important prognostic factor for patients with localized melanoma is tumor thickness.**
- **Patient education, access to care, and early intervention are primary tools used to detect early melanoma that can be treated, preventing advanced disease, and, thereby decrease mortality.**
- **A usual source of care enhances preventative and screening medical services; often provided by insurance, however, benefits unlikely known or difficult to obtain due to language barriers and work constraints.**
- **Healthcare providers' increased cultural competency leads to improved health outcomes in minority patients and higher patient satisfaction scores.**

REFERENCES Vancouver style

1. Ponce N, Tseng W, Ong P, *et al.* California Asian Pacific Islander Joint Legislative Caucus. *The State of Asian American, Native Hawaiian and Pacific Islander Health in California Report.* California: California Program on Access to Care, California Program on Opportunity and Equity, and Kaiser Permanente, 2009. Print.

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Please use relevant and contemporary references where appropriate.

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This is Vancouver style. Please use this. Do not simply cut and paste online sources

All figures must be clearly annotated. Use arrows if necessary.

2. Bailey EC, Sober AJ, Tsao H, *et al.* Chapter 124. Cutaneous Melanoma. In: Goldsmith LA, Katz SI, Gilchrest BA, editors. *Fitzpatrick's Dermatology in General Medicine, 8th ed.* New York, NY: McGraw-Hill; 2012.
3. **Ortiz CA, Goodwin JS, Freeman JL. The effect of socioeconomic factors on incidence, stage at diagnosis and survival of cutaneous melanoma. *Med Sci Monit* 2005; 11:RA163–72.**
4. Linos E, Swetter SM, Cockburn MG, *et al.* Increasing burden of melanoma in the United States. *J Invest Dermatol* 2009; 129:1666-74.
5. Idorn LW, Wulf HC. Socioeconomic status and cutaneous malignant melanoma in Northern Europe. *Brit J Derm* 2014; 170:787-93.
6. Reyes-Ortiz CA, Goodwin JS, Freeman JL, *et al.* Socioeconomic Status and Survival in Older Patients with Melanoma. *J Am Geriatr Soc* 2006; 54(11):1758-64.
7. Starfield B, Shi L. The Medical Home, Access to Care, and Insurance: A Review of Evidence. *Pediatrics* 2004; 113:1493-8.
8. Nemet GF, Bailey AJ. Distance and health care utilization among the rural elderly. *Soc Sci Med* 2000; 50:1197-208.
9. Person DA. Pacific Island Health Care Project: early experiences with a web-based consultation and referral network. *Pac Health Dialog* 2000; 7(2):29-35.

FIGURE/VIDEO CAPTIONS *Figures should NOT be embedded in this document*

Figure 1: Large, exophytic, hyperpigmented, polypoid, acral mass.

Figure 2: Marked pigment deposition throughout the basal layer on the lower magnification, H&E, 4X.

Figure 3: Lentiginous proliferation of atypical melanocytes on the basal layer of the epidermis, and a few scattered pagetoid spread, H&E, 20X.

Figure 4: Large, pigmented, pleomorphic cells with nucleoli and chromatin irregularities. Multiple mitotic figures, some atypical, are present, H&E, 20X.

Figure 5: Amputation of affected limb and dissection of acral mass.

PATIENT'S PERSPECTIVE *Optional but strongly encouraged – this has to be written by the patient or next of kin*

The patient's family declined to provide a written statement.

This is often the most valuable part of the case report. The patient should write in their own words. A good time to do this is after the case report is written, so that the patient may give informed consent and their perspective at the same time.