

Community dermatology

Wound and Lymphoedema Management. World Health Organisation

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Preface

Wound healing and lymphoedema have long histories, extending some thousands of years, in oral and written traditions. Significantly, these topics have been recognized as worthy of workshops, seminars, international congresses and inclusion in the curricula of schools of medicine and allied health professions. This attention reflects a better understanding of genetic and environmental research, as well as applied research, into dressings and medical devices. Much of the leadership has been from Wound Healing Centers based in Dermatology Departments.

In describing “best practice” in elite (usually urban-based) units, we are referring to “gold standards” and “evidence-based practice” (EBP). These are increasingly based upon randomized controlled trials (RCTS). We are identifying high technology, which is desirable but expensive. Ideally, such technology will be available in at least one centre in every nation or region, and access will extend, as much as possible, to all that are in need.

In making essential health care available to all, that which is common must be addressed at the most peripheral level. Self-help in the home is desirable, and the low technologies required should be available locally at low cost in a sustainable system of provision. It focuses on safe and effective remedies, while eliminating the unsafe and reducing availability of ineffective remedies. Such an approach should contribute to poverty alleviation. Necessary knowledge must be taught. For example, remedying malnutrition by the growing of nutritional herbs at everyone’s back door requires identification, optimal usage and preparation, dosage, and acceptance.

We intend that tertiary care will consist of a team of specialists providing their expertise within the focus of a vertical programme, thus providing an integrated approach in the hospital setting. The knowledge base of this team should filter down to lower levels at flexible rates of change and transfer from the vertical to the horizontal. It should prevent overwhelming of the tertiary level by common problems that can be managed at a lower level. The primary aim of the tertiary team should be to enhance knowledge and practice at the lower level, receiving only what cannot be managed at that lower level. How far the rich knowledge base of a vertical programme penetrates to a lower level will depend on the prevalence of the disease covered by that knowledge.

The horizontal systems of delivery of care to the primary or general health services cannot cope with the receipt of packages of best practice from each discipline. For example, leprosy is rich in handbooks, but they will collect dust in a health centre seeing only one case every four years.

However, if that same centre treats many diabetic foot ulcers, the patient with leprosy can receive the same treatment. It is clearly unnecessary for lymphoedema due to different causations to require separate instruction manuals from the lymphatic filariasis expert, the podoconiosis expert, and the post-surgery or radiotherapy experts. The scabies, pyoderma and fungal diseases that overwhelm all skin services are better managed at the lowest level with minimal instruction. Improved confidence in managing the commonplace allows rare diseases to be identified as uncertainties suitable for referral to a higher level.

Information in this document usable at low cost at the village and home levels should be made available with a mind to delivering it in simple one-day courses. We believe that a focus on the wound and all its complex features can be simplified, and common denominators can be selected. We believe that many of these common denominators have universal value as gems of public knowledge. Such coordination is a valuable topic in public health in an era threatened by increasing poverty, climate change, and the mobility of populations facing emerging epidemics and neglected diseases. If all people knew how to wash while conserving water and applied this low technology to wound care in an optimal way, it would provide a no-cost contribution to “Health for ALL”.

Knowledge of wound and lymphoedema care is mostly new. The importance of patient concordance, adherence and sometimes compliance is also newly recognized. If we expect much of the knowledge in this document to be used in “home-based management”, we should recognize the advances being made in the descriptions of these health problems. We should use terms such as “disabilities, impairments, and handicaps”. Patients and those who provide for them appreciate such language. We also must recognize that patients are worthy members of the “TEAM”. Indeed, without patient participation, optimal use of the knowledge in this document will not happen.

Wound healing in the developing world

The term “wound healing” embraces all types of wounds, burns and ulcerations. Complete wound healing includes restoration of function hardly ever achieved in those disfigured by wounds, especially when one includes the appearance” of the skin or absence of an appendage. Most texts on wound healing, are becoming more complex with every edition (Krasner, 2007) and emphasize “gold standards” that are achieved only in urban hospitals of major cities in the developed world. This is a small, elite, and very expensive model. Despite rapid urbanization, much of the world is still rural, most wounds occur away from the elite centers, and most peoples of the world are poor. The term “developing world” may be equated with tropical, but in fact, apply to the developing world as well (Ryan, 1993). This white paper addresses wound healing applicable to rural Oxfordshire in the United Kingdom, communities of rural Africa, villages of India (Ryan, 2007), the Australian outback, or the Indian villages of the American subcontinents.

The primary health care concept initiated at Alma Ata and periodically reviewed by the World Health Assembly (WHO 2000) is a system theoretically well suited to rural communities. It is a system supported by the local community to address their health care needs using available resources and appropriate technology. Patients are treated in or as close to their homes as possible. Treatment should be affordable and adequate. Because the occurrence of wounds is unpredictable, any resource for their management should be continually available. The health care worker in the rural village should have appropriate knowledge, equipment, and transport. While delivering health care, he or she should be above all, an educator. All useful sources of knowledge should be integrated in the program to provide the principles of hygiene, including

the knowledge of the traditional healer or major systems of medicine used by India and China's billions. If a community can support a pharmacy, the staff should be well informed about the early management of wounds, and encouraged to advise their patrons as needed. It is important to understand local health problems in the light of local customs and enlighten them by bringing them to the attention of collaborations that use all the expertise available. That is the concept.

The challenges of wound healing in the developing world are bound to the reasons for the failure of health care delivery, which are linked, in turn, to poverty and social unrest. Conflict and the excesses of climate change can ruin the best-made plans to manage with limited resources. Internal displacement and the general mobility of populations adds considerable unreliability to follow up.

Much of the world is resource poor but every nation should aim to have widely distributed primary care with access to secondary and tertiary levels of healthcare, all achieving good practice standards. These standards are based on evidence and carried out as a consequence of effective training and evaluated practice. Wound management has its place at every level from home based care of wounds, the district level of the health service, to the best equipped and staffed hospital in a nation's capital city

It is our purpose to add to every community locally available, sustainable management of wounds at the lowest possible cost. The focus will be on educating carers whose role is to achieve tissue viability or optimal wound care. Such carers can be found near the patient's home, at the door of the village health centre, or tilling the herbal garden of the local healer. Ideally, their training will be about the best methods in wound healing while rich in understanding of local belief and culture.

Quality of life issues, personal preferences, priorities, and motivation are important considerations. Caretakers must want to relieve odor and pain and help the mobility of their patients, encouraging them to be well groomed, allowing them to maintain adequate hygiene by bathing and, above all, making them welcome so that they can be embraced, marry, and be employed.

To achieve these goals, complete healing is necessary approaching normal color, contour, and function. Management of wounds where poverty is unalleviated requires missionary zeal for some basic objectives. There must be food and drink for the patient, protection from flies, antisepsis, good surgical technique, a temperate environment, and a knowledge of the requirements for achieving one's potential in the community.

Necessity of low cost wound management

Further developments are dependent on adequate research funding, an increasingly scarce resource. Yet many low technologies are undervalued, underfunded, and tend to be neglected. It is these low technologies, available locally, and sustainable at low cost, which form the foundation stones of wound management in resource poor settings.

Causes of delayed wound healing

Many wounds of healthy tissues heal at a predictable rate. However, there are three main groups of essential factors, without which healing is delayed. The first is the need for an adequate blood supply without the interposition of space occupying clots, necrotic tissue, foreign bodies or soft tissue infection (Ryan, 2007).

The second group of factors relates to the general health of the wounded. They are systemic factors such as anemia. Malnutrition often is insufficiently understood or recorded. Malnourished skin has impaired function and can show signs of disease even when not wounded. Kwashiorkor, scurvy and pellagra are examples. Where wounds occur in a population with manifestations of malnutrition, it is likely that the whole population has subclinical malnutrition.

The third group of factors contributing to non-healing relate to access. They include the distance and nature of the terrain travelled to seek help, and the kind of transport. When reached, how available, knowledgeable, and skilled are the caregivers? Do they have adequate resources? Is the equipment appropriate and sustainable? Is the treatment beyond the means of the patient?

A contrast between resource poor and resource rich persons is the access to family. In the developing world the extended family and the generous time made available by family members is a rich resource because such caregivers are willing to learn caring skills. Unhappily, this resource is diminishing. One-child families, women going to full-time work make care of the elderly sick by family members a major challenge even in crowded urban communities. The demographic changes of the HIV/AIDS epidemic can eliminate the resource in some communities.

Evidence based wound healing

Good standards of practice need a strong evidence base, what Archie Cochrane termed Effectiveness and Efficiency (Cochrane, 1972). Although, many novel drugs began as traditional wound-healing agents growing in a pot on the windowsill of the slum or gathered by relatives of the wounded in the forest (Burford *et al.*, 2007), the safety of commonly used agents should be demonstrated before recommending them. The large populations of India and China rely on their traditional systems of medicine and export them widely. Both nations are applying modern biomedical tools to test the safety and effectiveness of traditional medicinal products. Training the prescriber is another challenge. This White paper provides a background for the design of future Training Manuals and adds weight to the growing field of public health skin care (Ryan, 2007)

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