

Community Dermatology Journal



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Community Dermatology Journal – where are we now?



A health centre in Ethiopia. Photo: Paul Buxton

Welcome to issue 14, eight years after an editorial board was formed and the first issue appeared. Since then, with one exception, two issues have been published each year and currently 16,000 copies are distributed free of charge to health workers in 178 countries.

Initially, the journal was published by ICTHES World Care (International Community Trust for Health and Educational Services), a charity founded by Murray McGavin in 1999 which already published Community Eye Health and other journals. Since 2010 production has been undertaken by Evonprint in Henfield, E Sussex, who provide a full layout, editing and printing service to a very high standard. The editors and various members of the Editorial Board carry out review of all material and proof reading and original articles are subject to external peer review.

In 2007 the International Foundation for Dermatology (IFD) under the auspices of the International League of Dermatological Societies (ILDS), generously provided both office facilities and the services of Eve Arnold, as a part time administrator. This has greatly enhanced the efficiency with which the journal is produced and makes for much better communication with contributors. It also means that it is produced under the aegis of the IFD – an important association that opens communication with an organisation actively involved in community medicine. We also have to thank the British Association of Dermatologists for its continuing editorial support and, in particular, John Caulfield, for his services.

The first issue stated that our objectives were to bring up to date, relevant information on the diagnosis and treatment of skin disease to health workers in rural areas, using the resources available to them. It also sets out to provide information that can be used to educate health workers and the populations they serve.

So how are we doing in terms of these objectives? Most comments have come from dermatologists in established medical centres and these have been encouraging. However it is hard to know how a rural

medical officer in a village in Tanzania or India views the journal; we welcome feedback!

It is a challenge to keep the contributions appropriate to the training and resources of community health officers. In this respect we have been very fortunate in having increasing numbers of papers from centres dealing with dermatology in the community. Recent examples include epidemiological studies of school children in North Eastern Ethiopia and a study on scabies and myiasis in Nigeria. The paper in this issue on skin diseases in HIV orphans is a collaborative study between the ALERT centre in Ethiopia and the London School of Tropical Medicine in London.

Other papers dealing with practical problems of obtaining clean water, using banana leaves for sterile dressings and the use of emollients are examples of practical methods of managing dermatological conditions in the community.

In a wider context the journal also aims to increase awareness of the need for Dermatology services in developing countries and to draw attention to the opportunities for providing them. The numbers of specialists spending time helping to train medical officers, nurses and doctors overseas is encouraging.

Distribution is always a challenge! It is disappointing when piles of the journal end upon an office shelf, rather than in the hands of workers in the community who need them. But on the whole distribution is very effective thanks to the commitment of helpers in the UK and overseas who see that copies reach the people they are meant for. The journal is available on line, which greatly increases its availability. The journal has electronic links with Teaching Aids at Low Cost (TALC) and we are establishing links with other health education websites.

Contents

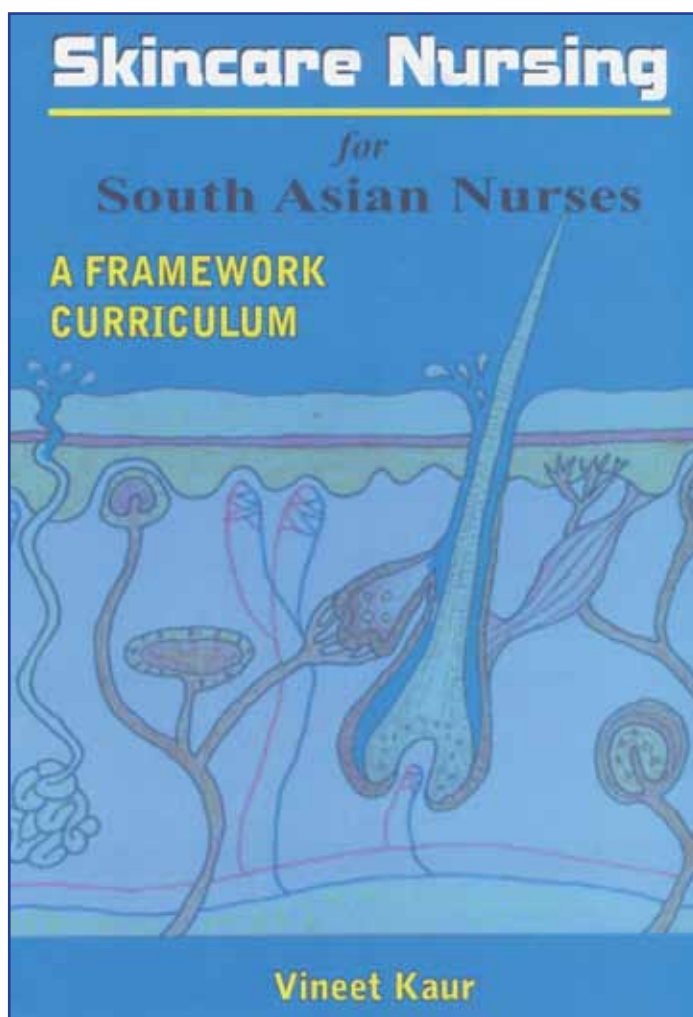
- 1 Lead Articles**
Community Dermatology Journal – where are we now?
Paul Buxton
- 2 Review of Skincare Nursing for South Asian Nurses - A framework curriculum** *R Penzer*
- 3 Skin Sutures** *Richard Goodwin*
- 5 Journal Extracts - Update on Onchocerciasis** *Michele Murdoch*
- 6 Pattern of Skin Diseases in HIV Infected Orphans of Addis Ababa, Ethiopia** *Shimelis Nigusse Doni, Steve Walker*
- 8 Distribution, Pattern and Management of Skin Diseases among Children in an HIV Orphanage**
Mawenzi Ramadham
- 10 Collodion Baby** *Giuseppe Gaido*

Review of Skincare Nursing for South Asian Nurses – A framework curriculum

Rebecca Penzer

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In writing a curriculum framework for nurses, Dr Vineet Kaur has acknowledged the importance of educating all pre-registration nurses in the fundamentals of skin care. Her excellent document encourages educators to take a holistic view of the skin focusing not only on the management of specific skin diseases, but also on prevention of disease and promotion of skin health.



The document is broken up into useful sections, each one containing proposed teaching topics and learning outcomes. Dr Kaur provides a rationale for each topic area and very much emphasises the specific needs of patients in resource poor countries. The framework allows scope for nursing educators to develop their own approaches to teaching the topics, but is absolutely clear about what needs to be taught in order to ensure that nurses can provide optimal care for their patients, regardless of the setting that they work in. Whilst it is reasonable to assume that a curriculum will be most useful in educational establishments, this document will be invaluable to those who direct education within practice. Experienced medical and nursing staff can make use of the framework to guide the assessment of competence in the staff they are responsible for.

It makes good sense that all educational establishments should embrace this document to ensure that their nursing students become well trained in the fundamentals of skin care. However, because of the pressure to teach a wide and ever expanding range of subjects, a valuable addition to this document would be guidance on how to incorporate its contents into existing curricula. For example skin structure can be related to issues of wound healing and pressure ulcers and skin assessment to the nursing process. By making these links educators can see the alignment with existing curriculum topics.

In summary, this booklet provides unique guidance that should influence how nurses are educated about the largest organ of the body. Educators and practitioners need to embrace its contents in order to ensure that this often neglected topic is properly taught to those who will provide care in the future.

The booklet is available from:

Dr Vineet Kaur, DNBE, Dip Gum (UK), FRCP,
B-34, Brij Enclave, Varanasi-221005, India

at a cost of INR100 + postage INR200

ISNG Contact details:

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Skin Sutures

Richard Goodwin

Consultant Dermatologist, Royal Gwent Hospital, Newport

There are several things to consider with sutures, including the following:

Are sutures required? Some wounds may be better suited to healing by second intention e.g. medial canthus of the eye. Where there is an area of pyoderma or infection, sutures may cause problems with retained infection.

Do I need sub-cutaneous sutures or simply cutaneous ones? Dissolving sub-cutaneous sutures give strength to a wound and may allow more delicate cutaneous suturing, with more accurate alignment of wound edges. But sub-cuticular sutures provide a potential focus for infection, which may occasionally be a concern.

How long do the sutures need to stay in place? This relates to the time for a wound to heal and is based upon the body site in particular (also general health and nutrition). As a rule, sutures on the face are removed after five to seven days, on the upper limbs and chest usually seven to ten days, while for the lower limb twelve to fourteen days may be required.

How (and who) will remove them? If in doubt, try to arrange to remove the sutures yourself – it is the quickest way to learn about your mistakes, as well as giving your patients confidence in your overall care.

Sutures for skin come in two forms

Braided sutures are usually made of soft, pliable materials that will break down (and lose their tensile strength) over a variable time. They are usually easy to handle and knot and are usually designed for sub-cutaneous sutures. The knots do not usually slip.

However, they are not so suitable for suturing on skin surface – the braid tends to attract exudate and infection more than monofilament sutures and also creates more of a scar reaction. Rapid-dissolving forms can be used for mucosal surfaces where it may be desirable to lose tensile strength after a week e.g. on mucosal surfaces of the lips or genitals.

Local reactions to the sub-cutaneous braided sutures can

sometimes lead to local inflammation in a scar two or three weeks after the operation. This can cause the patient concern, although it improves over the weeks.

Some braided sutures may be dyed (purple, for example) – these are best avoided as they can produce a tattoo for your patient at the wound site.



Monofilament sutures are made of a single thread or filament. Most are made of nylon and need to be removed once the wound has healed, but modern polymer compounds have also been produced to dissolve in sub-cutaneous situations. The smooth monofilament offers minimal surface area on which to harbour infections or cause tissue reaction, thus helping to reduce the scar reaction.

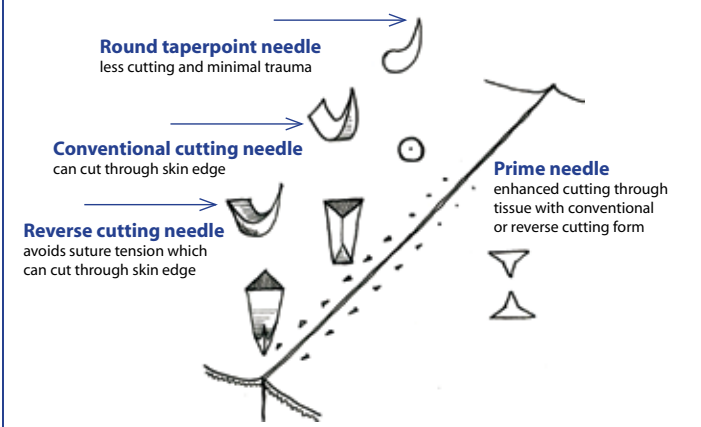
However, they are not so easy to knot as braided sutures and usually need an extra throw to ensure they hold. Some patients will still show a reaction to the dissolving forms when they are used as sub-cuticular sutures, although this seems to be much less common than with the braided sutures.

Suture size

The diameter or thickness of the suture is described as 2/0, 3/0, 4/0, 5/0 etc as sutures get smaller. As a rule, you will not normally need a suture thicker than 3/0 for the skin. The thicker the suture the stronger it is. The larger sutures are for areas of potential higher stress on the wound from stretching of the skin. For example, sutures on the limbs, torso or scalp would usually require a 3/0 or 4/0 diameter, while on the neck or face 4/0 or 5/0 would be better and delicate sutures around eyelids or ears might require 5/0 or 6/0 diameter.

Suture needles are usually provided already attached to your suture. For suturing the skin, a curved “reverse cutting” needle, triangular in cross-section, is required. The apex of the triangle is on the outside of the curve; this sharp edge helps to cut into the skin surface away from the wound edge and opposite the direction in which the suture will exert its tension. The curved needle is held by a pair of needle holders. Otherwise, there are

Monofilament suture		
Positives <ul style="list-style-type: none">• smooth surface• no bacterial crevices• less tissue trauma		Negatives <ul style="list-style-type: none">• memory• knot embedding
Braided suture		
Positives <ul style="list-style-type: none">• Soft and pliable• good handling• good knotting		Negatives <ul style="list-style-type: none">• provoke inflammation• tissue trauma• harbour infection



Round taperpoint needle
less cutting and minimal trauma

Conventional cutting needle
can cut through skin edge

Reverse cutting needle
avoids suture tension which can cut through skin edge

Prime needle
enhanced cutting through tissue with conventional or reverse cutting form

Skin Sutures *continued*

straight needles which are held by hand, but these are usually only for sub-cuticular use. The shape of the needle is always shown on the outside of the packet.

Do I need to give antibiotics?

If you are suturing with intact skin and aseptic technique then antibiotics should not normally be required.

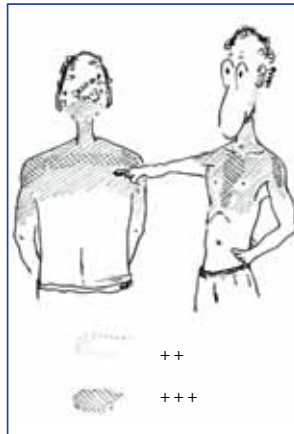


Consider antibiotics when preoperative skin is broken or crusted

If you are excising or incising an area of ulcerated skin, the risks of a surgical wound becoming infected seem to rise significantly and most authorities would recommend the use of antibiotics – typically, these are started on the day of surgery (ideally a first dose pre-operatively) and continued for five days post-operatively. These should have activity against *Staphylococcus aureus* – flucloxacillin or erythromycin, for example.

Keloid scars

Don't forget to explain to the patient about the type of scar you expect them to be left with after their surgery. In particular, the high-risk sites for keloid scarring should be remembered – the neck, upper shoulders, upper arms and sternum. You should warn the patient about this risk.



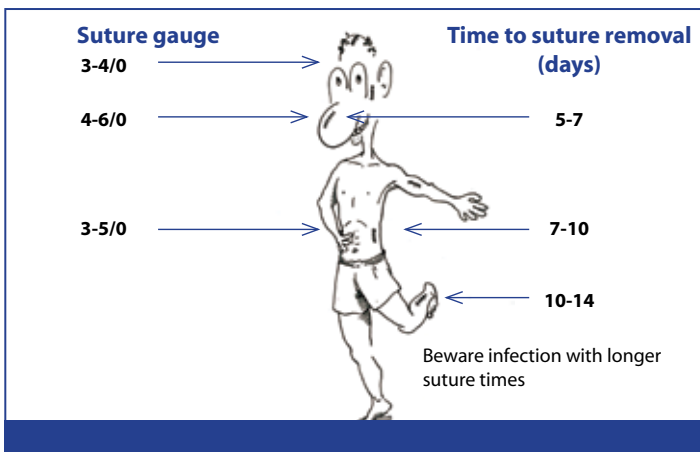
Keloid high risk areas

Be prepared

The other equipment you will need for suturing includes needle holders (unless you have a straight needle), a pair of forceps (to catch the needle as it comes through the skin) and a pair of scissors to cut the suture.

Ask the patient to wash the area for suturing with clean soapy water before the operation.

Make sure you have everything you need before you start your procedure. As well as the surgical instruments, you would like to have skin cleanser, drapes and surgical gauze available. If you have somebody to help it usually makes the operation so much easier.



Have an idea about what sort of dressing (if any) you are going to use and have it ready. Soft paraffin works really well over the suture line to keep the wound clean and humidified, glycerine would be similarly effective. They can be reapplied twice daily until the sutures are removed.



The following information should always be found on the packet:

The size of thread is 5/0 or 5-0 (how thick it is)

"Polysorb" is just the name of this company's product.

The suture thread is braided lactomer (dissolving), 18 inches or 45cm long and is undyed – this is suitable for sub-cuticular use.

The middle part of the packet indicates the shape and size of the needle as well as indicating it is a cutting needle (suitable for skin). The black triangle indicates the needle profile (cross-section)

Conclusions

Choice of suture will depend on what you have available, on which part of the body you are operating and what you prefer. There are a number of different options – if you are lucky enough to enjoy a regular supply of them keep things simple and stick to a small selection that you know work for you.

Acknowledgement

We are grateful to Dr David de Berker for the line drawings.



HIFA (Healthcare Information for all) 2015 is an educational programme whose ambition is that by 2015 every person worldwide will have access to an informed healthcare provider. There are specific projects directed at community health workers and health needs of children. An increasing number of reports and publications can be downloaded from their website www.hifa2015.org

Journal Extracts - Update on Onchocerciasis

Michele Murdoch

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Background

Onchocerciasis causes considerable cutaneous and ocular morbidity, including blindness. It can be effectively controlled by regular mass administration of ivermectin. Using six monthly treatments, transmission has been eliminated or interrupted in ten of the thirteen foci in Latin America. Once it is deemed safe to stop ivermectin distribution, countries undergo a three year period of post-treatment surveillance and in 2011 Colombia was the first country to achieve certification of elimination of onchocerciasis.

The majority of the global burden of onchocerciasis, however, is found in tropical Africa. Since 1995 annual mass community-directed treatment with ivermectin (CDTI) has been used in the African Programme for Onchocerciasis Control (APOC) in 16 countries in attempts to erase it as a public health problem. Until recently it was not thought that long-term ivermectin alone could eliminate onchocerciasis and interrupt transmission in Africa where the vectors are more efficient. A landmark paper of studies in Mali and Senegal (Diawara et al. 2009) provided the first evidence that 15 -17 years of ivermectin could reduce *Onchocerca volvulus* to such low levels that elimination could be feasible in Africa.

Diawara L, Traoré MO, Badji A et al.

Feasibility of onchocerciasis elimination with ivermectin treatment in endemic foci in Africa: first evidence from studies in Mali and Senegal.

PLoS Negl Trop Dis 2009;3(7): e497.doi:10.1371/journal.pntd.0000497

Impact of long-term treatment of onchocerciasis with ivermectin in Kaduna State, Nigeria: first evidence of the potential for elimination in the operational area of the African Programme for Onchocerciasis Control

Tekle AH, Elhassan E, Isiyaku S, Amazigo UV, Bush S, Noma M, Cousens S, Abiose A, Remme JH

Parasit Vectors 2012; 5:28

This article reports results from two foci in Kaduna, Nigeria. A baseline survey in 1987 revealed the community prevalence of positive skin snips ranged from 23% to 85% (median 52%). In 2008, after 15 to 17 years of annual ivermectin, a follow up survey of nearly 4,000 people over the age of one year found that everyone examined had negative skin snips. This is the first evidence within the APOC operational area that ivermectin may be able to interrupt transmission and hence eliminate onchocerciasis. Entomological evaluations are underway and if interruption of transmission can be confirmed, ivermectin treatment will be stopped and the area kept under surveillance.

The African Programme for Onchocerciasis Control: impact on onchocercal skin disease

Ozoh GA, Murdoch ME, Bissek A-C, Hagan M, Ogbuagu K, Shamad M, Braide EI, Bousinesq M, Noma MM, Murdoch IE, Sékétéli A, Amazigo UV

Trop Med Int Health 2011;16: 875-883

Several projects are underway to evaluate the impact of APOC activities on onchocercal disease burden. This study reports the impact of the programme on itching and onchocercal skin disease (OSD). Seven study sites in Cameroon, Sudan, Nigeria and Uganda

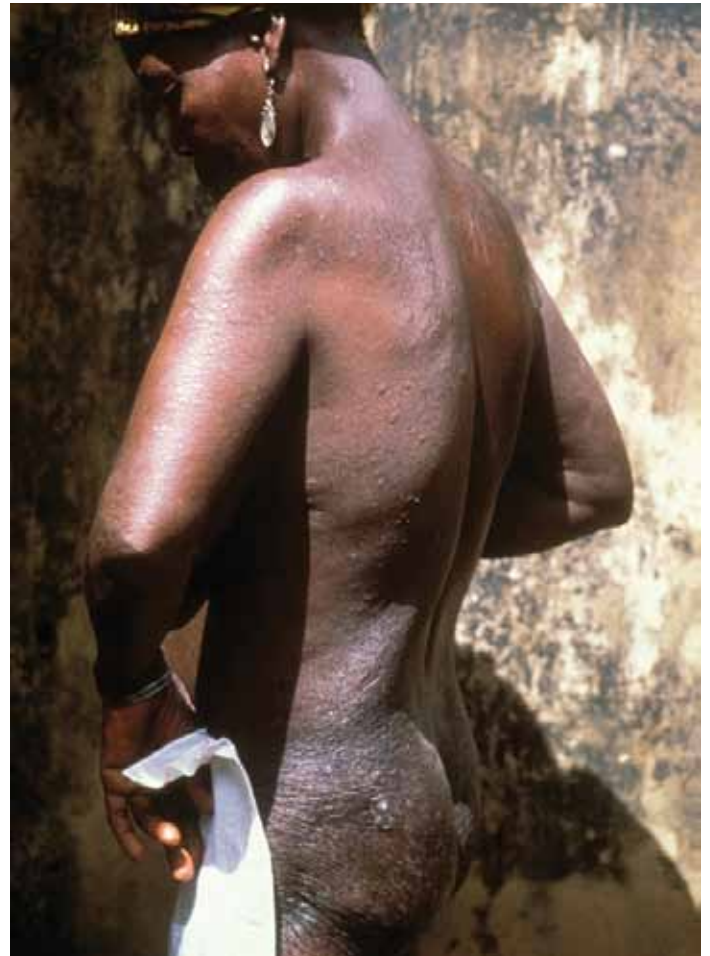
participated in two cross-sectional surveys of around 5,000 people before and after five or six years of ivermectin therapy. At follow-up, profound reductions were found in the risk of itching and all forms of OSD, suggesting that APOC operations are having a major effect in improving skin health in rural endemic areas in Africa.

Where would I be without ivermectin? Capturing the benefits of community-directed treatment with ivermectin

in Africa Okeibunor JC, Amuyunzu-Nyamongo M, Onyeneho NG, Tchounkeu YFL, Manianga C, Kabali AT, Leak S.

Trop Med Int Health 2011;16: 608-621

Structured questionnaires were given to 1,600 persons in four study sites in Cameroon, DRC, Nigeria and Uganda which had implemented CDTI for at least four years. In-depth interviews, focus-group discussions and case histories were also used. The social benefits of CDTI included improved ability to work, peer acceptance and improved school attendance. Other individual benefits included self-respect/esteem, election to political office and even improved relationships in the home. Health benefits included improved skin texture and cure of scabies and intestinal worm infections. Health education materials capturing beneficiaries' perceptions towards CDTI could be used to increase sustainability of ivermectin distribution in endemic areas.



Nigerian villager with chronic papular onchodermatitis over the shoulders and back and atrophy of the skin over the buttocks.

Photo: Michele Murdoch

Pattern of Skin Diseases in HIV Infected Orphans of Addis Ababa, Ethiopia

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²Consultant Dermatologist, London School of Tropical Medicine, UK

Summary

Skin disorders are common in children in Ethiopia and it is estimated that 92 000 Ethiopian children are infected with human immunodeficiency virus (HIV). HIV infection increases the prevalence of cutaneous disease but the effect of anti-retroviral therapy (ART) on the pattern of skin disease affecting children in sub-Saharan Africa is still unclear. Our objective is to assess the prevalence and nature of skin disorders in HIV-infected children living in a dedicated orphanage in Addis Ababa, Ethiopia. Treatment recommendations were made at the end of the study. The mean age of children was 10 and the mean CD4-percentage was 27.1%. Among the 83 children examined 66 (79%) had at least one skin disorder, most commonly tinea capitis (39%), molluscum contagiosum (21%), warts (21%) and seborrhoeic dermatitis (7%). We conclude that skin disorders are very common in HIV infected children.

Background:

It was estimated in 2007 that there were 92,000 HIV-infected children in Ethiopia and that 650,000 children had been orphaned because of HIV/AIDS². HIV affected children develop common and rare skin diseases differently from an immunocompetent population these conditions are often resistant to treatment. The presence of skin disease has been shown to be a strong indicator of underlying HIV infection in adolescents (age 10-19 years) admitted to hospital in Zimbabwe³. A cross-sectional survey of 347 HIV infected children attending treatment centres in Dar es Salaam, Tanzania, showed that 85% had a mucocutaneous disorder⁴; 74% of these were already receiving antiretroviral therapy (ART). The incidence of infectious skin diseases affecting children with symptomatic HIV infection was reduced after commencing ART in an observational study in Abidjan, Côte d'Ivoire⁵. The children treated with ART also had a lower incidence of skin infections than a group of untreated asymptomatic HIV-infected children. A retrospective study of 210 HIV infected children in Spain showed a significant reduction in mucocutaneous disorders following the introduction of "highly active" ART⁶.

Even though ART for children was introduced in Ethiopia in 2005, there are no data published about the pattern of skin disease in HIV-infected Ethiopian children. To our knowledge, there has not been also a community based study of the prevalence of skin disease in an HIV-infected paediatric cohort in sub Saharan African countries. The authors were invited by the director of an orphanage for HIV-infected children in Addis Ababa to examine the residents.

Methods

Two dermatologists performed a clinical examination including the



Fig 1. plane warts mimicking epidermodysplasia verruciformis
Photo: Dr Steve Walker

skin, hair, nails and oral cavity of all the residents of an orphanage in Addis Ababa in March 2010. The examiners knew that all the children were HIV-infected. Diagnoses were made clinically and recorded anonymously. Treatment recommendations were made after completing the examination.

The data were stored in an Excel database and analysed using GraphPad Prism (version 4.02 for Windows, GraphPad Software, San Diego, California). The threshold for accepting statistical significance was $p < 0.05$.

Results

Eighty-four children (53 (63%) male) were examined. The mean age of both males and females was 10 years. 57 (68%) were on ART and 51 (61%) were also on co-trimoxazole prophylaxis for *Pneumocystis carinii* pneumonia. Different ART regimens were used to treat these children. The vast majority (55 of 57) were taking a first-line ART regimen. The mean duration of ART was 29 months (Range 2-56 months). The median CD4 percentage was 27.1%. Sixty-six children (79%) had at least one skin disorder, 21

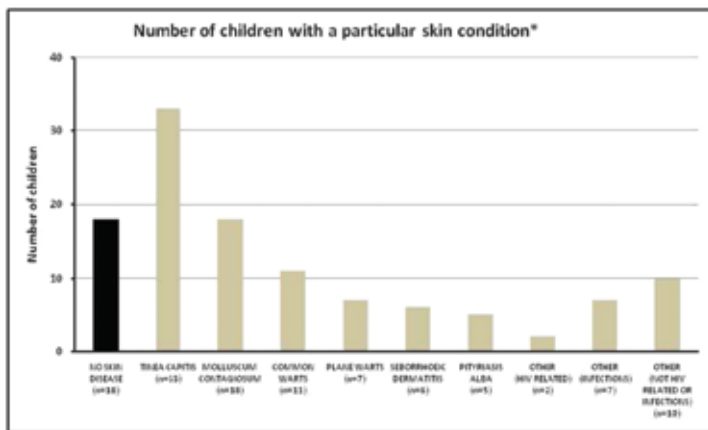


Fig 2. Number of children with particular skin condition

children had two skin disorders, and 6 children had three (Fig 1). The most common diagnosis was tinea capitis affecting 33 (39%) children. The other common diagnoses were: molluscum contagiosum (MC), 18 (21%); verruca vulgaris, 11 (13%); plane warts, 7 (8%); and seborrhoeic dermatitis, 6 (7%). Drug related diagnoses included zidovudine nail discolouration (Fig 3). A keloid scar secondary to previous herpes zoster varicella infection has been also diagnosed.

Discussion

In this pilot study, viral skin infections (molluscum, verruca vulgaris and plane warts) were the commonest diagnosis, affecting 36(42%) of HIV infected children. Those disorders, together with seborrhoeic dermatitis appear to have a higher frequency in HIV infected children. The prevalence of MC in this HIV infected cohort is much higher than that reported in other studies from Ethiopia. Figueroa et al reported a prevalence of 2.7% in rural Ethiopia¹.

Plane warts have been reported in up to 24% of HIV-infected adolescents in a hospital cohort in Zimbabwe³. The authors reported that the appearances resembled epidermodysplasia verruciformis and in our cohort six of the seven cases had extensive facial plane warts. The mean age of these children was 10 years (Range 8-14). The association of acquired epidermodysplasia verruciformis-like eruption and HIV infection has long been recognized in adults⁹ but our finding supports the findings of Lowe et al³ that African adolescents and younger children with HIV may also be affected. The lesions are often on exposed sites such as the face and are thus potentially highly stigmatizing.

Popular pruritic eruption (PPE) is reported to affect 18% of HIV-infected adults admitted to hospital in Kinshasa¹⁰. A workplace study of 127 HIV infected police officers in Dar es Salaam showed a lower rate of PPE of 7.1%¹¹. PPE affected 42% of the Zimbabwean adolescents described by Lowe et al³. Interestingly in our study no child had evidence of PPE. This finding may be the result of less severe HIV disease in our community-based cohort due to ART. The prevalence of PPE in children (aged two months to 11 years) in Thailand some of whom were outpatients was 5.5%¹² compared to 32.7% in HIV infected Thai adults¹³. This study supports previous findings of the role of ART in reducing mucocutaneous disorders related to HIV infection in children since no child had evidence of PPE but further work is needed to determine the role of ART in improving the lesions of MC and plane warts in children with HIV infection.

Acknowledgement

We would like to thank the children and staff of AHOPE Children's Home, Addis Ababa AHOPE Children's Home is supported by



Fig 3. Nail discoloration caused by zidovudine. Photo: Chris Lovell

AHOPE for Children, a non-profit organization, AHOPE for Children, Calabasas, California, USA. Dr Sofia Mengistu Abayneh, Country Director, Worldwide Orphans Foundation (WWO) who leads the HIV clinic attended by the children and provided very useful help.

Dr Walker was supported by the Special Trustees of the Hospital for Tropical Diseases, London, UK, an award from the Robert Cochrane Fund for leprosy and the Roger Harman Fellowship of the British Association of Dermatologists. No specific funding was obtained for this study.

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Distribution, Pattern and Management of Skin Diseases among Children in an HIV Orphanage:

A Community Dermatology Project

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Abstract

The aim of this project was to determine the prevalence and distribution of skin diseases among HIV positive children in Talitha Kum children's home, and to provide dermatological care.

All the children underwent a full dermatologic examination; 55% were found to have diverse skin diseases: 72.2% had tinea capitis, 15% had atopic eczema, 8% seborrheic dermatitis, 3% had verruca vulgaris and another 3% had pruritic papular eruption. Among children with tinea capitis, 16(66.7%) were male and 8 (33.3%) females; 37.5% of children with tinea capitis had inflamed tinea capitis (kerions) while the rest had non-inflamed types.

On account of the preponderance of tinea capitis, all children were given ketoconazole shampoo for prophylaxis while those with active tinea capitis were put on griseofulvin for 8 weeks. The home nurse was trained on management of common skin diseases and a linkage established between the researcher and the institution's management for further community dermatology visits. Follow up visits demonstrated 100% cure rates for children with T. capitis and prolonged remissions for those with recurrent skin disorders and an improved general skin health in the community.



Fig 1. An Ethiopian boy with Tinea capitis.

Photo: Chris Lovell

It is recommended that dermatology officers and dermatologists organise community outreach programmes for the purposes of assessing the dermatological health in the community, providing care, promoting dermatology health and giving basic dermatology training to health workers in peripheral centres in order to lessen skin related morbidity and improve quality of life among communities with skin disorders.

Introduction

Part of the focus of community dermatology is to gather facts about the distribution of skin diseases in specified populations, to use available and affordable technologies to solve dermatological problems encountered, to identify skin diseases that may need referral and to promote skin health through well organized public health dermatology activities¹.

Up to 90% of HIV positive individuals suffer or will suffer from one or more different types of skin diseases in the course of their HIV disease; the prevalence is higher among those with extremely low CD4 counts. The majority of skin diseases encountered amongst HIV seropositive individuals are infectious in origin followed by inflammatory skin conditions and cutaneous malignancy in that order²; this may however vary depending on the population studied and the geographical location.

Communicable skin diseases spread more efficiently among immunosuppressed individuals living together in care centers and, unless adequate and timely measures are put in place to stem the spread, such diseases can reach epidemic proportions. Contagious skin diseases such as fungal skin infections and scabies are especially common among crowded populations of low socio-economic status where obtaining adequate treatment may be hampered by lack of resources. Delayed or inadequate treatment of such diseases in such communities can lead to an increase of both their incidence and prevalence which translates to overstretched public health resources³. Timely community based dermatological interventions should therefore not only be encouraged but also supported.

This was a self funded community dermatology project which was conducted following a request by the charge nurse at Talitha Kum children home after observing that many children in the home had skin diseases. Talitha Kum children's home is run by the catholic

diocese of Nakuru in Kenya; it is situated off Nyahururu town along the Nyahururu-Nyeri road about 65 kms from Nakuru town. The home caters for 60 HIV positive orphans and vulnerable children.

Materials and methods

All children assembled on an open ground; the sister in charge who is also their legal guardian explained the purpose of the visit and gave consent for the project. Afterwards, all children were ushered individually into an examination room where, in the presence of the clinic nurse they underwent a full dermatological examination. Those found to have skin diseases were ushered into a separate consultation room where further examination and clerking was done. Diagnoses were made clinically. Their gender, age and diagnoses were entered into a computer and analysed by use of the SPSS program version 12.5. Treatment was prescribed according to the diagnosis and follow ups were conducted at 6 months and 1 year interval.

Results

A total of 60 children were examined (30 boys and 30 girls); they were all receiving antiretroviral therapy (lamivudine + stavudine + nevirapine) their ages ranged from 5 to 14 years, mean age was 8.2 years (SD \pm 2.36), median age 7 years.

The point prevalence of skin disease was 55%; (32% boys and 23% girls). Disease distribution was as follows: tinea capitis (72.2%; 66.7% were boys and 33.3% girls). 37.5% of children with tinea capitis had inflammatory disease (kerions) while the rest had non-inflamed types; atopic eczema (15%); seborrheic dermatitis (8%); verruca vulgaris (3%); pruritic papular eruption (3%).

Care was given as follows:

- Griseofulvin 10mg/kg for 8 for all children with tinea capitis;
- Ketoconazole scalp shampoo applied for 15 minutes then rinsed off; to be repeated twice weekly for 2 consecutive months.
- Atopic eczema was treated with mometasone furoate and hydrocortisone ointments depending on the site of disease.
- Verucca vulgaris was treated by local excision since lesions were on the external genitalia and upper thigh in one case,
- Seborrheic dermatitis was treated with ketoconazole cream while
- PPE was treated with oral cetirizine and mometasone.

Follow up after 6 months showed 100% cure rates for tinea capitis, only 6 (4%) either relapsed or had a re-infection a year later. Those with atopic eczema and seborrheic dermatitis reported long remission periods though as expected there were episodes of relapse. Verruca vulgaris did not recur and the case with PPE had not relapsed after 1 year.

Discussion

Community dermatology is an evolving tool for dermatological surveillance, management of common skin diseases and promotion of skin health in the community using cost effective and accessible means⁴. Through community dermatology, peripheral and community-based health workers are given basic

dermatology skills, epidemiological studies are undertaken and public health dermatology activities are initiated¹. Community dermatology thus helps to reduce the burden of skin diseases through early detection and management of communicable and non-communicable dermatoses among individuals in the community⁵.

The responsibilities of dermatology officers include the participation in community dermatology projects where they visit communities to assess and manage dermatological health and help in controlling diseases: The importance of community dermatology in Africa cannot be over emphasised considering the high prevalence of HIV/AIDS which has significantly increased the prevalence of skin diseases in the continent⁶.

Skin diseases of all kinds are prevalent among HIV positive individuals of all ages, however, cutaneous infections are the leading causes of secondary morbidity among paediatric populations⁷. Fungal infections, especially tinea capitis swiftly spread from one child to another and have the potential to initiate endemic disease states and even epidemics among immunocompromised paediatric communities sharing common facilities⁸. To stem outbreaks of such disease and to relieve suffering, rapid and timely management is obligatory: If left untreated or inadequately treated, tinea capitis can linger for years causing a continuing domestic financial burden, complications such as alopecia and a negative quality of life⁹.

Tinea capitis is the most common fungal infection among children in Africa regardless of their HIV status: a survey conducted in Ethiopia revealed that tinea capitis was the leading dermatosis among school children (point prevalence of 30.5%)¹⁰. Children living together, especially in care centres may be especially prone to scalp fungal infections partly due to the prevailing shaving practices where children are shaved by one barber using the same hair clippers. Skin health education targeting care-takers, children and barbers about good skin care techniques and proper sterilization of hair shaving machines is therefore vital.

Timely community dermatology outreach interventions have both short and long term benefits— contagious skin diseases among the community are effectively cured and their spread curtailed; recurrent dermatoses are controlled and qualities of lives improved; skin health promotion is achieved and preventable skin diseases are averted. Ultimately, the public health burden occasioned by skin diseases is reduced significantly and optimal skin health is achieved¹¹.

Understanding the distribution of skin diseases in specified populations helps health administrators to plan effective distribution and utilisation of available skin-health resources and can, most importantly, be used to positively influence policy regarding skin morbidity- an event which has been habitually regarded as trivial.

Despite the contagiousness and preponderance of tinea capitis in the home, tinea of other parts of the body was a conspicuously absent; the reason for this is unknown and probably more research need to be done to explain the discrepancy. Tinea capitis has frequently been identified in other surveys of African children both with or without HIV but what is interesting in this current study is the very high number of cases (37.5%) of

inflammatory tinea capitis, an unusual finding in this setting. It raises the question as to whether inflammatory fungal scalp infections or kerions are manifestations of the immune reconstitution inflammatory syndrome (IRIS). In one study of observer agreement on the manifestations of IRIS in a South African paediatric population tinea capitis, as well as corporis, were both singled out as conditions potentially subject to change with immune reconstitution but it was not clear if the investigators were describing inflammatory lesions¹². It may as well be true that kerions among children on highly active antiretroviral therapy may represent IRIS; further research toward this direction is apt.

There were no cases of bacterial skin infections, scabies or pediculosis as is commonly seen in such communities; this may be due to improved general hygiene at the home under the guidance of a registered nurse- a fact which underscores the importance of improved skin hygiene in prevention of contagious skin diseases.

Since tinea capitis is rampant among paediatric populations living in closed communities, it is recommended that mass oral treatment with griseofulvin or routine antifungal scalp shampoos be given to all children in care centers any time one of them is found to have tinea capitis.

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COLLODION BABY

Dr Giuseppe Gaido

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This 2 day old child born with extensive skin detachment and ulceration, was admitted to Cottolengo Mission Hospital.

Our hospital is a rural one, in the central part of Kenya. He was born through simple vaginal delivery at a rural maternity unit located at about 50 Km from our facility.

There is oedema of the body, skin ulcerations and impressive ectropion at both eyelids. The skin looks thick, dry and similar to plastic. The oral mucosa is intact and the child is able to breast-feed.

The condition was present at birth.

We have put a clinical diagnosis of collodion baby.

It is impossible to find a venous access due to the conditions of the skin, and therefore we are treating the child with oral medications: we have covered him with an oral cephalosporin, and we give paracetamol per os in case of fever. The collodion baby is actually very prone to sepsis.

The child is in a humidified incubator to regulate the body temperature, while preventing dehydration. Surprisingly he is able to feed well, and we allow the mother to breast-feed him. We have also instructed her to add dextrose 5% per os, in order to further prevent dehydration.

We apply emollients on the skin to protect it from further cracks and further increase of ichthyosis.

Unfortunately we are not able to monitor the electrolytes because we have no vein available.

For what we have read in literature, we have very little hope to save the patient, because we do not have ICU and retinoids are not available in our set up.





Dr Gaido expressed his interest in hearing management suggestions from dermatologists with experience of this group of conditions. We are pleased to append a response by Dr Richard Goodwin, and we are always pleased to hear of the experience of others.

Thank you for your enquiry.

Your photographs of this two day old infant demonstrate the features of a "collodion baby" very well: the taut, shiny thickened skin that has the appearance of plastic or wax or collodion, as well as the everted eyelids (ectropion), lips (eclabion) and bound down ears. The skin on the fingers looks very tight and the fissures across the torso are also typical.

These babies need to be managed for the first few weeks of life in an incubator, where you can maintain the high humidity and temperature that benefits their skin. These babies are at risk of bacterial infection (from the fissures in the skin, but also from any intra-venous lines), as well as dehydration due to increased fluid loss across the very red skin surface and hypothermia due to increased heat loss for the same reason. Strict barrier nursing, with all staff and the parents washing their hands before handling the baby, will reduce the risks of sepsis.

The other complications to be aware of include exposure keratitis from the ectropion and constriction of the drying membrane with the risk of bands developing, particularly around digits. Sometimes surgery is required to release constriction bands around fingers in order to prevent ischaemia and auto-amputation.

The application of soft paraffin to the skin will help to stop the constriction and reduce water loss from the skin. It will reduce pain from exposed fissures and probably reduces the risk of infections, too. It will also help protect the cornea from damage until the ectropion corrects itself. The membrane is thought to be very absorbent – take great care to avoid some topical medications such as silver sulphadiazine or anti-microbials. Wash with clean water and dilute anti-septics.

Antibiotics may be required for septic episodes. Paracetamol (15mg per kg four times a day) for pain relief given twenty minutes prior to handling is sensible.

Feeding is not normally a problem, but watch for blocking of the nostrils and be prepared to gently probe if there is suspicion of blockage. Supplementing the breast feeding with extra fluids as you have done is also a good idea to reduce risks of dehydration.

The infant will benefit from maximum calorie input, so supporting the mother's diet is also a good idea. A naso-gastric tube may otherwise be needed.

Your local literature may relate to more severe forms of the condition in your local families, but sometimes parents, nurses and doctors are put off by the alarming appearance of these infants and may be reluctant to give them the care they need early on. Delaying such care reduces the chance of survival. Encourage your parents to be involved in the cleaning and lubricating of their infant's skin, to help them bond and develop their confidence with the new baby. The best chance these infants have is if they get good skin care from motivated professionals and parents.

These babies face a difficult first few weeks until the membrane sheds itself. Once this has happened, the underlying ichthyosis (fish-like scaly skin) usually becomes more apparent. Oral retinoids are not required early in life. Importantly, a minority of babies will go on to have completely normal skin. The main on-going treatment for all forms of ichthyosis is good skin care with emollients.

If the sort of nursing care described here is not something that other readers can provide locally or there is no incubator, think about referring the family to a local hospital facility if you are able .

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