

Pages from a dermatologist's diary

W D H Perera¹

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I consider it a great honour and a privilege to have been invited by the president and the committee to deliver this second and the most prestigious oration in the dermatology calendar. I am aware that this is a gesture of appreciation shown to me as a senior member of the Sri Lanka Association of Dermatologists. I am all the more fortunate that the oration fell on a day that we are having a joint meeting with the German Dermatological Society, with whose members I have had a close relationship over the years. This was recognised a few years ago when I was made a honorary corresponding member of the German Dermatological Society.

During my dermatological career which spans over 30 years, which I assume has still not ended, I have had the good fortune of witnessing the revolutionary changes that have taken place in dermatology, in the world in general and in Sri Lanka in particular. Over the past three decades dermatology has evolved to be a speciality in focus with many developments in the investigative field like immuno-histology which made us understand immuno-bullous diseases and other immune disorders better. In the therapeutic field with the introduction of a whole range of drugs from retinoids, multidrug therapy for leprosy, calcipotriol to tacrolimus and new treatment modalities like photochemotherapy and the development of lasers.

In Sri Lanka we have seen the minor speciality of dermatology developing into a distinct discipline with the establishment of the Board of Study in Dermatology and the training programmes of our own to produce the much needed dermatological services for the country. We have also seen some of the new approaches fortunately trickling slowly but surely into the country like immunofluorescence, photochemotherapy and laser treatments.

During these years while witnessing the development of the speciality, I have in my work come across in Sri Lanka a whole range of interesting clinical phenomena and many dermatological diseases not recognised in the past. Some of these have been presented at meetings of our association and the

re-call of some of them today, will, I hope help the development of the speciality further and give a glimpse to the younger generation the inquiring mind that a dermatologist must possess. The oration is therefore titled "Pages from a Dermatologist's Diary".

After training in General Hospital Galle under Dr Palitha Abeywickrema followed by training at the Leeds General Infirmary under Professor William Cunliffe, I was ready to take on the challenge of working as a lone consultant in any district in Sri Lanka. At the beginning, the challenges were many, like organising clinic rooms and wards. However the most significant of the challenges were in the practice of clinical dermatology. My first such posting was to Ratnapura the city of gems where I came across many a problem. Take for instance this lady who was diagnosed as a patient with psoriasis not responding to treatment. We admitted her to the ward and close examination made us suspect a different diagnosis. This is the same lady 3 days after the application of benzyl benzoate. That was my first lesson out of many, a case of Norwegian scabies misdiagnosed as psoriasis. Another instance where lack of experience and the disadvantage of not having a professional colleague is demonstrated in this person on whom I made a clinical diagnosis of sporotrichosis since I was looking for exotic diseases at the time. Before reports of investigations could arrive I decided to treat him with the only anti-fungal available at the time for sporotrichosis that was potassium iodide. The lesions unfortunately continued to spread and new papules with a central depression appeared on his chest and upper back. It took me some time to realise that I was causing iododerma and that was the first and the last time that I have seen and produced iododerma. The patient had pyoderma gangrenosum which responded well to steroids. The statistics at the skin clinic in Ratnapura from 1975 to 1977 show a similar pattern to the rest of the country at the time. A fact we have observed over the years is that the incidence of Chromomycosis is higher in the Ratnapura district than in the rest of the country, most likely due to the climatic conditions and the main occupations, agriculture and the gem industry.

¹ Consultant Dermatologist (Formerly at the National Hospital of Sri Lanka), Kuruppu Lane, Colombo 8.

My next move was to Kandy, the place where I had my medical training which was indeed a stimulating experience. Yaws has many an association with this country. It is considered a disease of the past and it is only a name to most doctors in Sri Lanka, never having seen a case. Yaws was thought to have been introduced to Sri Lanka by the Portuguese, when they brought their slaves from Africa. The disease was called "Parangi" meaning a foreign disease. The disease became endemic in the country in the early nineteen hundred especially in the rural setting in the dry zone of the country¹. There is a saying that "there is syphilis where the roads begin and yaws where the roads end" both very similar diseases. The disease was completely eradicated from the country in the 1950's with the use of penicillin. Even the WHO was under the impression that it had been completely eradicated from the country when we saw this 12 year old girl from Mahiyangana. She was ill with fever, lymphadenopathy, macular-papular lesions and these little tumours which are described as raspberry tumours or framboesia, from the French word for raspberry - *framboise*. Histopathology and the lab findings confirmed the diagnosis. The other association of yaws with this country is that the causative spirochaete, *Treponema pertunae* was discovered by Sir Aldo Castellani while working in Sri Lanka in 1906.

Cowpox is generally accepted as primarily a disease of cattle even before Edward Jenner. Cowpox is transmitted to man accidentally by contact with the lesions. According to the department of animal husbandry cowpox occurs sporadically in Sri Lanka. I have had the opportunity of seeing two cases of cowpox. This is a person who used to milk a cow with infected udders and this is a man who was lying in a shallow pool of water frequented by cattle for about two hours. He was after alcohol. The lesions were quite typical, a papule which becomes vesicular and pustular with umbilication and surrounding erythema². The lesions are very similar to lesions of primary vaccination. Cowpox is still being reported mainly due to infection from cats (catpox) in other countries. Acrodermatitis enteropathica is a primary disease of zinc deficiency and thought to be an autosomal recessive disorder. Although the clinical features of the disease were described in detail by Brandt in 1936³, he did not name the disease, although he suggested that the lack of an essential food element may be involved.

Forty years later, his concept turned out to be true when Barnes and Moynaham in 1975⁴ linked it to zinc deficiency. While working in Kandy we reported the first case of Acrodermatitis Enteropathica in the country at the Kandy Society of Medicine, Annual Sessions in 1984⁵. A 19 month old girl, second female from consanguineous parents presented with skin lesions

around the mouth, eyes, genitalia, anus and on hands and feet. The lesions were ulcerated with a necrotic crusted black border. Her milestones were delayed and there was almost complete loss of scalp hair. Although unfamiliar with the condition, we were able to suspect the diagnosis which was confirmed by zinc levels. It was then fascinating and heart warming to see the child's growth back to normal within the next few weeks while on zinc supplements. Her brother when 9 months old, i.e. at the time of weaning turned up in our unit about a year later with similar eruptions and we were able to confirm the diagnosis and treat him successfully. They are now young adults and this is our first patient at my farewell from the National Hospital about a year ago. I became so familiar with the clinical features of the condition, that when I was called up to see this patient in a paediatric ward in Saudi Arabia, I was able to make the diagnosis without any difficulty to the surprise of the paediatricians. As you know zinc is a component of important enzymes - metalloenzymes in mammals. Examples of metalloenzymes with zinc are carbonic anhydrase and alkalinephosphatase among many others. Zinc is also involved in several stages of nucleic acid metabolism and deficiency of zinc interferes with immune functions, growth and sexual development. Causes of zinc deficiency are nutritional, alcohol, GI disorders, severe burns, renal disease, pregnancy, iatrogenic - total parenteral nutrition and jejuno ileal bypass and genetic or primary zinc deficiency - "acrodermatitis enteropathica".

Skin lesions of this nature appearing suddenly in persons usually at night was traditionally thought to be caused by the urine of cockroaches. Work done by Dr Satheeka Kamaladasa and myself has shown it to be caused by beetles of the genus *paederus*. Our study was reported in the *International Journal of Dermatology* in 1997, where we studied 124 cases of staff and patients of the Sri Jayawardanapura General Hospital who were affected by this dermatitis⁶. We were also able to reproduce lesions in human volunteers. The beetle involved belongs to - Coleoptera, family: Staphylinidae, genus: *Paederus*, and species: *Fucipes*. The insects breed in damp soil and become active after heavy rains. At night the beetles are attracted to artificial light usually the bright fluorescent lights. When they fall on humans, reflex brushing away of the insects causes accidental crushing of the insects allowing pederin which is a vesicant to cause the skin lesions. Linear lesions due to rubbing of body fluids, kissing ulcers, drip marks and blisters associated with burning pain are typical of *paederus* dermatitis. Since the night staff at the hospital are mostly female and the insects find their way into the upper parts of the body the creatures were aptly and affectionately referred to as "tel manamalayas" or "oily paramours".

Let me take you now to unusual presentations of some skin diseases. Cutaneous larvae migrans or creeping eruption is a common disease in Sri Lanka being caused by dog and cat hookworms. It produces itchy red raised and serpigenous patterns. Commonly one such lesion is seen. We have seen and reported patients where a large number of larvae, hundreds have entered and become active at the same time. These pictures are of two soldiers who were on bunker duty in the east coast of Sri Lanka and took turns to lie down and rest in the wet sandy soil, following monsoonal rains⁷. The large number of lesions in these patients make the diagnosis difficult. Recently I have seen a similar picture in some rugby players who were doing floor exercises on wet grounds in Colombo.

Kerosine oil also known as paraffin is extensively used in the country. It is cheap and readily available. Poisoning with kerosine either accidentally or consuming with the intention of committing suicide is common and account for 9 to 12% of all the poisonings in the country⁸. These patients had similar histories, they were young adults and they had consumed varying quantities of kerosine oil with the intention of committing suicide. In the process they had spilled kerosine on their clothes. The clothes were not removed for well over 12 hours. The result is a bizarre rash with epidermal necrolysis⁹. If fact Lyelle in his review of 128 cases of toxic epidermal necrolysis in 1967 included one case of externally applied kerosine. Wilkins and Barnes¹⁰ who described two such cases in 1973 suggested that these should be referred to as epidermal necrolysis rather than toxic epidermal necrolysis as there is no preceding toxemia.

Now let me get on to my favourite topic, that of contact dermatitis in the country. Clinic data from hospitals around the island give an incidence of 1.3 to 4.9% for contact dermatitis^{11,12}. In a prevalence study done recently contact dermatitis accounted for 3.3% of the population¹³. In the case of allergic contact dermatitis patch testing done in the skin department of the National Hospital in the recent past showed that the first four allergens in the order of frequency as Chromate, PPD mix (hair dye), Nickel and fragrance mix, whereas the results 14 years before has shown a different picture, Chromate, Nickel, Cobalt and Rubber^{14,15}. The rise in the incidence of PPD and fragrance mix reflects the present trend in the country where there is an increased use of cosmetics, hair dye and perfumes.

Sri Lanka being a tropical country and also with regional variations in climate and elevation is blessed with a rich and a diverse flora. In spite of its obvious advantages and the beauty it is well known that plants may cause skin reactions. I would like to take you

through some of the reactions encountered and described by us. This plant called *Semicarpus* or "Badulla" in Sinhala belongs to the family Anacardiaceae. Anacardiaceae family includes well known plants like Mango, Cashew and in the USA, poison ivy and poison oak. There are five species of *semicarpus* in the country and sensitised individuals react with an extremely itchy vesicular dermatitis with streaks of vesicles along points of contact. Face and areas exposed are commonly affected and the reaction is often severe requiring treatment with systemic steroids. Even exposure to dried leaves and stem produces the dermatitis. *Semicarpus* plants produce a fruit with a black exudate and this is traditionally used to mark laundry in the country. In individuals who are allergic to contact with the laundry mark (dhobie mark) may cause a dermatitis. Recently I had three patients all residents of the US, two of them with a history of contact dermatitis to poison ivy in childhood, the other a Sri Lankan living in the US for 18 years exposed to poison oak, developing a dermatitis to the Sri Lankan laundry mark while visiting the country. This kind of cross sensitivity between plants of the anacardiaceae family have been reported in the past¹⁶. The daisy family or compositae family is one of the largest families of the plant kingdom, which includes well known flowering plants like dhalias and chrysanthemums. This plant *Titonia diversifolia*, wild sunflower or "Nattasuriya" in Sinhala, is a plant introduced as a garden plant to the Royal Botanical gardens at Peradeniya in 1851¹⁷. It is a native of South America and now it grows in the wild especially at road sides at mid elevations in the country. We have described an allergic contact dermatitis of the airborne type due to this plant. In a group of patients we saw in Kandy, the dermatitis varied from a few weeks to many years. It involved the exposed areas and early patients had erythema, vesiculation and oozing and the late cases showed lichenification and pigmentation. The dermatitis due to *Parthanium hysterophorus* seen in India is very similar. Another plant dermatitis we have described is due to picking and handling of the flowers. This is a plant belonging to the apocynaceae family called "wal idda"¹⁸. Those who pick flowers develop an allergic contact dermatitis of the finger tips and those making garlands like this man develop a dermatitis of the palms and fingers. Phytophotodermatitis is a reaction caused by sun exposure after contact with a plant. The reaction seen is an erythema with or without blisters followed by hyperpigmentation. The reaction is phototoxic in nature and is due to the presence of psoralens. The plants which cause this reaction belong to the families of umbelliferae, rutaceae where lime is an example, moraceae leguminaceae where *Cassia alata* or "Ath thora" is an example. This is following the use of lime as a

shampoo. This is due to application of lime and exposure to the sun. This patient has applied cassia alata on arms to remove scars of chicken pox.

Madam president, ladies and gentleman, I hope I have been successful in making the pages of my diary interesting and I hope I have stimulated the younger dermatologists here to record many more conditions of this nature.

I would like to thank my colleagues for the encouragement given, my senior registrars, registrars and house officers who have worked with me over the years, some of whom are now eminent consultant dermatologists. I would also like to thank Mr Udaya Kaluarachchi for helping me with the script and my wife Ranji and our two sons Thushara and Gehan for the love and support given to me over the years.

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