Case Study: 10 year old girl with ulcer on elbow.

This young girl presented to the Health Centre at Obo on the Fly River with an ulcer the size of a 20 toea coin. The mother stated that it had started with a small blister five weeks prior to that. The Nursing Officer at the Health Centre was concerned because the ulcer had undermined edges. Having cared for other patients with similar ulcers, she contacted the doctors immediately. The family was advised to travel to hospital for surgical care, but took a further few weeks to procure the airfares needed. Meanwhile dressings and antibiotics were given. On admission to the hospital she had an ulcer about 6 x 4 cm with indurated skin at the edges. There was no significant tenderness. She was taken to theatre for excision of the ulcer. The edges were largely undermined so she ended up with a much larger skin defect. Within a couple of days, the base of the ulcer was granulating well and she received a split skin graft.

Conclusion: Below

Case Study: - continued.

This girl's ulcer was clinically typical of those caused by Mycobacterium ulcerans, commonly called 'Buruli Ulcer'. Buruli ulcer frequently occurs near water bodies and cases have also occurred following flooding. The mode of transmission of M ulcerans to humans is not clear. It affects all age groups but predominantly those under 15 years. Males and females are equally affected. The disease can affect any part of the body, but most lesions are on the extremities with lower limbs affected more than upper. Unlike tuberculosis (TB), there is no evidence to suggest that infection with the human immunodeficiency virus (HIV) predisposes individuals to BU infection. There is also no evidence that the disease can be transmitted from person to person.

Buruli ulcer often starts as a painless, skin nodule or as an area of induration or a diffuse swelling of the legs and arms. The disease progresses with no pain and fever, hence the delay in seeking

treatment. However, without treatment, massive ulcers result, with the classical, undermined borders. Sometimes, bone is affected causing gross deformities. When lesions heal, scarring may cause restricted movement of limbs and other permanent disabilities in about a quarter of patients. The differential diagnoses for Buruli Ulcer include: tropical ulcers; cutaneous leishmaniasis (South America), yaws, onchocerciasis nodules; and fungal skin infections.

Buruli ulcer is often diagnosed and treated based mainly on clinical findings. Ziehl Neelsen staining of swabs from the edges and base of the ulcer will yield Acid fast Bacilli in about 40% of cases.

Current recommendations for treatment are as follows:

- A combination of rifampicin and streptomycin/amikacin for eight weeks as a first-line treatment for all forms of the active disease. Nodules or uncomplicated cases can be treated without hospitalization.
- Surgery to remove necrotic tissue, cover skin defects and correct deformities.
- Interventions to minimize or prevent disabilities.

Cumulative experience of treating about 300 patients in Benin, Cameroon and Ghana has shown that treatment with rifampicin and streptomycin (RS) for eight weeks according to WHO guidelines leads to complete healing of nearly 50% Buruli lesions. Interestingly, it is also possible to treat some of the patients on ambulatory basis. Recurrences after antibiotic treatment is less than 2% compared to 16-30% with surgical treatment alone. These encouraging developments are changing the strategy for BU control and treatment which until 2004 focused on surgical treatment.

In the absence of effective tools to control BU, current control strategies are aimed at reducing the prolonged suffering, disabilities and socioeconomic burden associated with the disease.

In our case, the awareness that the Nurse had of the disease led her to advise the patient to come to hospital. In retrospect, initiating anti-mycobacterial treatment while awaiting airfares to come to hospital would probably have helped to limit the disease.

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