

DISEASES
OF CHILDREN
IN THE

H. C. TROWELL
AND
D. B. JELLIFFE

ARNOLD

DISEASES OF CHILDREN IN THE SUBTROPICS AND TROPICS

By

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DISEASES OF CHILDREN IN THE
SUBTROPICS AND TROPICS



Kwashiorkor in Northern Sudanese child, showing oedema of the lower legs, a generalized fine flaky-paint dermatosis, most marked on the buttocks, and slight hypochromotrichia

PREFACE

The majority of the world's children are born in the subtropics and tropics, and in these regions the death rate in childhood is higher than in the temperate zones. This is not due merely to the presence of the so-called tropical diseases, but reflects the low standard of living which permits the presence of infection and malnutrition, both of which are often present in the afflicted child. This situation is changing rapidly and in all these countries a general increase in the medical and social services has made it possible to devote more attention to the care of children.

At one time there was an impression, even in Europe and America, that the diseases of children differed little from those of adults; it was merely that they occurred in smaller people. General physicians cared for sick children. These days have passed as far as the technically advanced countries are concerned, but in the tropics an impression lingers on that if one can master, for example, the principles which underlie a parasitic infection, then one can understand the manifestations in an adult and, therefore, those in a child. This is not so.

At the moment there is no comprehensive book dealing with the clinical aspects of the diseases of children in the subtropics and tropics. This book endeavours to supply this need. While suitable for undergraduates at the more advanced medical schools, for it discusses only the common diseases, it is designed especially for those engaged in post-graduate study or those who are actually working to promote child health whether in general practice or in more specialized fields.

To achieve this purpose contributions have been written by those who have had first-hand experience in certain diseases. A panel of some seventy members has been drawn from all over the world, so that most regions in the subtropics or tropics are represented.

An attempt has been made to describe all common diseases seen in children in these regions, whether due to a tropical or a cosmopolitan disorder. Material has been arranged, however, so that there is as little overlap as possible with the standard textbooks of paediatrics and tropical medicine. It is assumed that the reader has access to these works and can consult them on many details not set forth in this book. Likewise this volume avoids describing rare diseases or those which can be treated only at the most advanced centres. The emphasis is always on the common causes of morbidity, their recognition and treatment, even under the most difficult circumstances, and, above all, their prevention.

H. C. T., D. B. J.

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Chapter 1

GENERAL BACKGROUND

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The majority of the world's child population lives in the subtropical and tropical regions of the world where technical development is now beginning. It has been estimated that there are 150 million children in India alone, but, until very recently, little attention has been paid to their problems and even now knowledge of them is very defective (Cicely Williams, 1955).

Although the problems of paediatrics in the tropics are similar to those in the temperate zone, the pattern and picture of disease in childhood is influenced and modified by the following overlapping socio-economic and medical factors.

Low standards of hygiene, poverty and ignorance

In most areas, water supplies are unprotected and unclean as, for example, the *dobas* or muddy village ponds of rural India. Latrines and other facilities for excreta disposal are inadequate, if they exist at all, so that defaecation is often performed in the adjacent "bush" (Fig. 1.1). Household rubbish is dumped near the dwelling place or in the compound. The breeding of flies and the contamination of water supplies (Fig. 1.2) produce a high incidence of bowel infection, especially in children, including infantile diarrhoea (p. 357), dysentery (p. 369) and typhoid (p. 590). At the same time, intestinal parasitism, especially ascariasis (p. 402) and ancylostomiasis (p. 415), is widespread in children, often with heavy worm burdens.

Housing, while varying greatly, is frequently overcrowded, dark, leaky, and poorly ventilated, especially at night (Fig. 1.3). In many places it is customary for all doors and windows to be tightly shut against thieves, wild animals and evil spirits. In the clap-board shanties of the West Indies, the *tukuls* of the Southern Sudan, the mud *kutchas* houses of rural India and the hovels in the *bustee* districts of South-East Asian slums, a family of ten or more may sleep together in one tightly sealed room and droplet infections of the respiratory tract, including tuberculosis (p. 237), develop very easily, while skin sepsis is common as a result of hot, dirty housing, insect bites (p. 849) and scabies (p. 557) (Figs. 1.4 and 1.5). (This overcrowding and general lack of sanitation may perhaps produce some slight compensatory benefit. It has been suggested that the relative uncommonness of certain diseases in tropical



FIG. 1.1. Rubbish heap in back streets of S.E. Asian town, encouraging breeding of rats, flies and cockroaches, and attracting *pariah* dogs.



FIG. 1.2. Village *doba* (pond) in rural India, used for washing clothes and utensils, bathing, keeping ducks, pisciculture, watering buffaloes and drinking. Danger of spreading such alimentary infections as bacillary dysentery and typhoid, especially to children.