

Identification of Patients with Reasons (Photographs): Rickets, Marasmus, Kwashiorkor

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Objective

To identify nutritional deficiency diseases such as **Rickets, Marasmus, and Kwashiorkor** from photographs and justify the identification based on their clinical features.

Introduction

Nutritional deficiency disorders are caused by prolonged deficiency of specific nutrients.

- **Rickets:** A disease of growing children due to **Vitamin D, calcium, or phosphate deficiency**.
 - **Marasmus:** Severe form of **protein-energy malnutrition (PEM)** due to deficiency of both calories and proteins.
 - **Kwashiorkor:** A disease caused primarily by **protein deficiency** despite adequate calorie intake.
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Materials Required

1. Photographs of patients showing symptoms of Rickets, Marasmus, and Kwashiorkor.
 2. Charts and reference books on nutritional disorders.
 3. Laboratory/teaching aids for clinical feature demonstration.
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Procedure

1. Observe the provided photographs carefully.
2. Note the **visible clinical symptoms**.
3. Compare features with standard descriptions of Rickets, Marasmus, and Kwashiorkor.
4. Record the reasons for identifying each case.

Observations

1. Rickets

- **Photographic Features:**
 - Bowed legs or knock-knees.
 - Enlarged wrists and ankles.
 - Deformed chest ("rickety rosary").
- **Reason for Identification:**
 - Caused by Vitamin D deficiency leading to defective bone mineralisation.

2. Marasmus

- **Photographic Features:**
 - Severe wasting of muscles and fat.
 - Very thin limbs, “old man’s face” appearance.
 - Prominent ribs.
- **Reason for Identification:**
 - Due to deficiency of **both proteins and calories**; seen in infants under 1 year.

3. Kwashiorkor

- **Photographic Features:**
 - Oedema (swollen belly, face, feet).
 - Sparse, discoloured hair.
 - Dermatitis and skin depigmentation.
 - Irritability and lethargy.
- **Reason for Identification:**
 - Caused by **protein deficiency** despite sufficient calories, common in children 1–5 years.

Discussion

- Rickets arises from **micronutrient deficiency (Vitamin D & calcium)** affecting skeletal development.
 - Marasmus and Kwashiorkor are **Protein-Energy Malnutrition (PEM)** disorders, differing in whether both protein & calories (marasmus) or only protein (kwashiorkor) are deficient.
 - Clinical recognition is important for **early intervention and treatment**.
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Conclusion

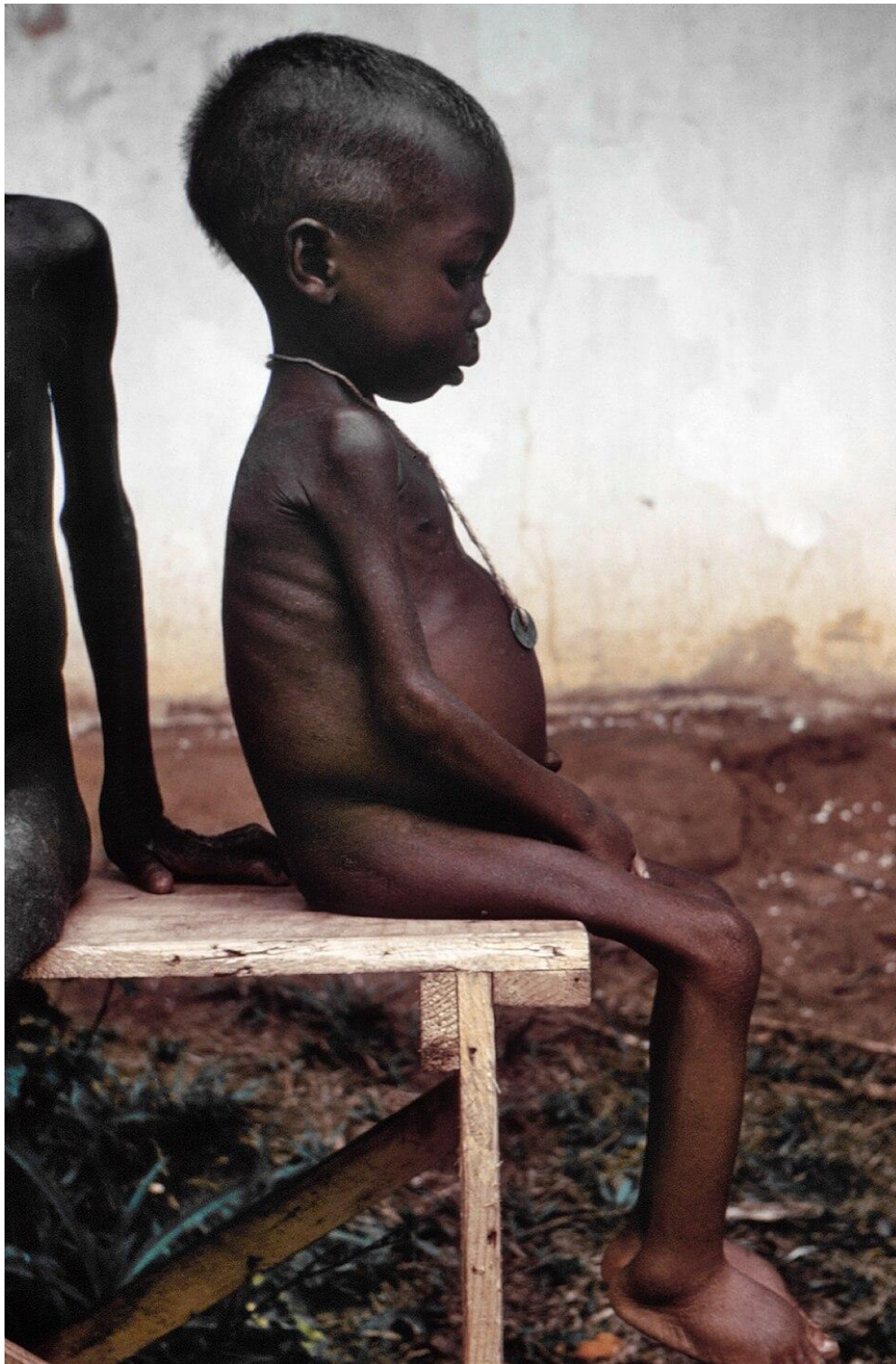
The patients in the photographs were successfully identified as suffering from **Rickets**, **Marasmus**, and **Kwashiorkor** based on distinct clinical features. This exercise enhances understanding of nutritional disorders and their diagnosis.



Rickets



Marasmus



Kwashiorkor