

Microscopical Diagnosis of Tropical Diseases for Haematologists

Introduction

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Modern technology has revolutionised medical diagnosis. Modern automated blood-cell analysers provide valuable information about the nature of blood cells. However, there are morphologic abnormalities critical in the differential diagnosis that can be determined only from the blood film. In some cases, a careful look at the blood film may establish the diagnosis more promptly than is possible by any other means.

The blood film should be reported taking into consideration the patient's clinical context. It is important that haematologists who report blood films are aware of the clinical history, clinical findings and, also, the patient's geographical area of origin and travel history.

The evaluation of blood film is particularly useful in the field of tropical and travel medicine. Major protozoal and helminthic infections are readily recognised by blood film examination, and many diseases in the tropics — infectious, genetic, metabolic, or malignant — frequently manifest themselves in the blood. In large areas of the tropics, common haematological problems include iron deficiency anaemia, malarial anaemia, haematological effects of HIV infection, eosinophilia, abnormal haemoglobin syndromes, and a wide range of malignant haematological diseases. The blood film plays an important part in the diagnosis of these disorders, but it is reliant on the expertise of the individual microscopist. In addition to morphological skills, an adequate travel and clinical history is important for accurate diagnosis of tropical diseases.

As the number of refugees and migrants grows, and the popularity of international travel to more exotic and remote parts of the world continues to increase, haematologists increasingly need to recognise diseases of tropical and travel medicine by microscopical examination of blood or bone marrow specimens. The study of the morphological features of these disorders is thus very important.

Since 2016, the Foundation of the Hellenic Society of Haematology and the Hellenic Society of Haematology have established monthly seminars in morphology for

haematology registrars. One of the most popular seminars is the microscopical diagnosis of tropical diseases. The seminar has been assigned to Konstantinos Liapis, a consultant haematologist who is well known for his interest and expertise in the field. The seminar is based on the large personal file that he owns with blood films and bone-marrow smears of patients with a wide spectrum of tropical diseases. This work was inspired after his successful seminars, and is published by the Hellenic Society of Haematology with the purpose to share his knowledge with a large audience. 'Microscopical Diagnosis of Tropical Diseases for Haematologists' is written from the morphology instructor's viewpoint.

The focus for the text has been directed towards detailing the morphological characteristics of tropical diseases; epidemiological, microbiological, and clinical information that permit one to distinguish these disorders have also been included. This work includes more than 160 high quality colour photographs of microscopical preparations of peripheral blood and bone marrow (mostly original photographs from his personal collection). Each of the photographs has been selected as a visual reinforcement to the written instruction.

'Microscopical Diagnosis of Tropical Diseases for Haematologists' is published in two thematic issues of HAEMA: the first (part 1) deals with infectious diseases prevailing in tropical and subtropical areas, tropical splenomegaly, and eosinophilia, and the second (part 2) deals with miscellaneous haematological problems in the tropics (ethnic neutropenia, genetic blood dyscrasias, nutritional disorders, and neoplastic conditions).

The purpose of this publication is to provide the haematologist with an instruction manual to assist in the learning of microscopical characteristics and also with a reference manual to be used in the making of precise, accurate morphological identification of tropical haematological problems. I deeply believe that haematologists will find the contents of the two thematic issues extremely useful.