CONTINUING EDUCATION PROGRAM: EDITORIAL

Infectious diseases: An issue of current concern

Infectious diseases regularly make the headlines in newspapers. We remember the pandemic linked to the SARS virus that occurred in 2003, triggering a worldwide alert that resulted in a large number of aircraft being immobilised and epidemiological surveillance systems being set up in many countries.

Infectious diseases have a history with a beginning (so-called emergent diseases) and for some, an end, which makes them rather atypical compared with the whole range of diseases affecting humans.

It was the development of agriculture about 10,000 years ago, and the establishment of agricultural societies with denser populations combined with the domestication of livestock, which provided opportunities for pathogenic agents to pass from one species to another. This is how we estimate measles to have emerged about 7,000 years ago, from a rinderpest virus affecting cattle. This virus gradually became exclusively human as the size and density of the human population grew enough for its activity to be maintained without an animal reservoir. The same is true of smallpox, which became epidemic about 4,000 years ago and arose from a virus infecting camels.

More recently, it was the development of trade 1,500 to 3,000 years ago that promoted the exchange of many pathogens: the first recorded appearance of typhus seems to be associated with the Peloponnesian war in 430 BC, and the great worldwide pandemic of bubonic plague in 542 A.D., which extended from China to England, is said to have killed 25 million people in Europe (i.e. approximately a quarter of the population).

In the 19th century a third epidemiological period began, with the European conquerors taking their pathogens with them to North and South America and infecting the indigenous Indians.

Today, the human race is living through a fourth epidemiological transition with the appearance of new bacterial, viral and parasitic infectious diseases with a multiplicity of causes: deforestation and urbanisation, the generalisation of transport over very long distances, and even immunosuppression and the appearance of resistance of certain infectious agents to treatment.

Infectious diseases are therefore an issue of current concern and it is essential that radiologists maintain their level of knowledge in this particularly changing area. This collection of papers presents certain aspects of these diseases, setting out organ by organ the signs and symptoms and sometimes the therapeutic treatments of which the radiologist should be aware. There are indeed many issues concerning us: the choice of the most suitable examination, and performing it, knowledge of infectious diseases, remembering their extreme diversity and variability over time, and at least elementary knowledge of the treatments which may follow from the investigations we undertake. In presenting the topic of infectious diseases, our concern is to highlight the complementary nature of radiological and clinical approaches and, in many areas, this is considered by specialists from each of these fields.

The aim of this publication is therefore to assist you in your activity which is bound to be faced with the management of infectious disease, whatever your organ speciality. The
authors of the articles are specialists in the subject, known for their experience, either clinical or radiological, in the area that they cover.

I would like to thank all the authors for taking part in this work which should serve as a basis for the best possible management of the imaging of infectious diseases.

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