Parvoviruses and human disease


In the 1970s, during a search for hepatitis B virus in serum, a new precipitating system was found which was later recognised to be due to a novel human virus (parvovirus B19), present in considerable amounts in serum and capable of forming a line of precipitate with the corresponding antibody. The finding remained a curiosity for some time but the virus has now emerged as a pathogen in its own right. This book is a summary of its position so far.

Investigations, primarily in the editor's own laboratory, demonstrated that B19 was the elusive cause of erythema infectiosum (also known as Fifth disease and Slapped cheek syndrome) and was possibly also responsible for haemolytic crises in patients with sickle-cell disease and other diseases where red cell survival was shorter than normal. Subsequent work has confirmed that these disparate syndromes are due to the same virus and that infection can present differently in children and adults. The book summarises these investigations. Each section was written by those involved, which gives authority to the whole.

Subsequent to publication, further evidence has accumulated of a role for the virus in pregnant women, as a cause of fetal loss. However, although there is a systemic infection, the virus is unlikely to join the ranks of agents inducing fetal deformities.

The book, then, contains useful basic information on a virus whose role in disease was unknown less than 10 years ago. Other parvoviruses, infecting both man and animals, are well described and the B19 virus, which is the real hero of this book, is put into context against the others. The chapters describe the clinical features of infection in previously healthy persons as well as in patients with underlying haemolytic diseases, outline volunteer studies and describe the methods of routine diagnosis. They provide information of interest to virologists, microbiologists, clinicians (in infectious disease and in obstetrics), those who wish to plan volunteer studies and even, perhaps, readers of whodunnits. The story of B19 and other parvoviruses is not yet complete but work reported in this book will form the basis for future studies and it will be seminal reference work for some years to come.

C. R. Madeley