

Annotated Bibliography on Laboratory Diagnosis of Diarrhoeal Diseases 1985-1981

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Introduction

Gastrointestinal infection particularly diarrhoeal disease constitute one of the major challenges of the medical profession. Despite a virtual revolution that has take place the diagnosis and treatment of diarrhoeal in the past two decades or so, diarrhoeal diseases continue to exact a heavy toll on the lives of young children particularly in developing countries.

Accurate diagnosis of causes of diarrhoeal is important to import rational the therapy to patients to define the extent of the problem due to particular pathogens and eventually to institute control measures. In the past several years a plethora of new diarrhoeal agents has been identified by improved techniques that has considerably narrowed the gap that has existed in our knowledge on the a etiologies of infection diarrhoeas. In some instances conventional culture techniques or identification of pathogens have been superseded by rapid and simple assay systems for direct identification of antigens in body fluids. The sensitivities of existing enzyme-linked immunoassay system have been increased by introduction of newer substrates. development of monoclonal antibodies against an array of pathogens has greatly improved the specificity of diagnosis.

Yet another achievement is the wider application of simple staphylococcal coagglutination test for the detection of a number diarrhoeal pathogens. The development of nucleic acid probes for virulence determinates of intestinal pathogens has introduced a new dimension in large-scale screening of pathogens of epidemiological studies although their full potential in the routine diagnosis is yet to be realized. Replacement of hazardous and limited shelf-life radioactive labels of nucleic acid probes with stable non radioactive labels have made these diagnosis tools even more appealing to wider use. The " jewel in the crown" of achievement so far has been the development of polymerase chain reaction technique. The exquisite sensitivity of this detection system theoretically allows the detection of even a single copy of a particular nucleic acid sequence in the specimen opening limitless possibilities for diagnosis and treatment.

The major challenge however remains the diagnosis and treatment of disease in the rural areas of developing countries where the problems are acute. Let us hope that the simplification of exiting technique and development of newer ones will continue to take place in the days ahead to tackle this challenge , when village health workers will be armed with simple diagnostic tools to do on the spot diagnosis.

In the following pages we have attempted to compile a list of references on the laboratory diagnosis oh diarrhoeal disease that have appeared in print since 1985. We have tried to make this list as exhaustive as possible and yet it is likely that we would have missed some important references for which we offer our apologies. It is hoped that this volume will serve as a ready-reference to laboratory personnel involved in research and diagnosis of diarrhoeal disease not only in developing countries , but in the developed countries as well.

References

144. Gandhi, B.M. (1986) A dot immunobinding assay (DIA) on nitrocellulose membrane for the serological detection of antibodies to *Entamoeba histolytica*. Transactions of the Royal Society of Tropical Medicine and Hygiene 80, 883–885.
145. B. M. Gandhi, M. Irshad, T C Chawla, B N Tandon Enzyme linked protein-A: an ELISA for detection of amoebic antibody. Transactions of the Royal Society of Tropical Medicine and Hygiene 81(2):183-5, 1987