



Handling of Infection Causing Agents and Their Collection

Upasana Das Adhikari*

Department of Immunology and Cancer Biology, Hebrew University of Jerusalem, Jerusalem, Israel

Corresponding author: Upasana Das Adhikari, Department of Immunology and Cancer Biology, Hebrew University of Jerusalem, Israel, E-mail: udasadhikari@mgh.harvard.edu

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Editorial Note

Isolation is a key technique for preventing spread of infectious diseases in hospitals. It can be physically and emotionally disturbing and disruptive of clinical care and therefore should only be used where there is proven or likely benefit. Strong evidence of efficacy is available for some infectious agents including MRSA, tuberculosis and multiply resistant coliforms. Isolation policies are made at individual hospitals and local protocols should always be consulted. If these are not available consult microbiologists and infection control team. We have not included instructions for medical and nursing procedures for the surveillance, control and prevention of infection in hospital we refer readers searching for this information to the excellent handbooks and comprehensive reference texts that cover nosocomial infection control. Systematic reviews of the evidence for infection control interventions are being available. Source isolation is designed to prevent infected patients from transmitting their disease to others. Protective isolation is used to prevent immunocompromised patients from acquiring infection. It is of less certain value, particularly as most infections in neutropenic patients are endogenous. Most units concentrate on protecting against specific organisms, antibiotic prophylaxis and microbiologically clean food. Details of sample collection and transport vary from laboratory to laboratory but a general summary of principles follows. Laboratories differ on whether they routinely perform certain tests on particular specimens. Virus culture is usually only worth attempting early in the course of infection. Specimens for culture of bacteria and fungi should always be taken before antibiotic therapy is commenced sputum, mucosa and open wounds become colonized particularly rapidly with resistant bacteria.

Screening of contacts or of cases for clearance is only occasionally useful for any pathogen out of hospital and should always be done only according to policies. Specimens are always best transported immediately to the laboratory. If delay is necessary all samples should be refrigerated. Swabs tissue and pus are maintained in sterile universal container because additional rapid tests can be performed. A swab is an inferior substitute upon which delicate organisms die. Use firm pressure when taking swabs and always use the appropriate swab transport medium. Inclusion of charcoal in transport media or swap tips increases recovery of many bacteria. Use special pernasal swabs, surface swabs of deeply infected swabs usually grow surface contaminants and rarely grow the causative organisms. Only isolation of some species correlates with true deep infection.

Samples from drainage bags are not representative of the microbial population within the commensal bacteria. Medical devices tips of IV catheters suspected of being infected should be cut off with alcohol wiped scissors and sent in a sterile universal container for semi-quantitative culture. Growth of colonies of some infections and any growth of other bacteria or fungi is likely to be significant. Small infected prostheses can be sent entire but it is best to scrape adherent material from larger prostheses. Prepuce and labia should hold away from the urine stream but periurethral cleaning does not additionally reduce contamination from adults as long as the initial stream is discarded. That's how the samples collection and handling should be like.