

CLINICAL MICROBIOLOGY

Pages with reference to book, From 45 To 45

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When a patient is suspected of having a microbiological infection, the primary aims of investigation in the microbiology laboratory are to establish whether an infection is in fact present or not, to identify the causative organism or organisms as soon as possible and to out which antimicrobial drugs are likely to be effective against it. Such information allows more accurate diagnosis better treatment, clearer prognosis, and the recognition of steps that should be taken to prevent spread of infections to others. The discovery that the infection is due to a virus or other organism for which there is no effective drug treatment may save the patient from being given irrelevant antibiotics with their attendant hazards. Proof that a patient is carrying or has recently carried a potential pathogen does not necessarily amount to proof of its responsibility for his illness, due allowance must always be made for its known rate of carriage by healthy people and for the likelihood of its producing the type of illness from which the patient is suffering. Even a rising level of antibodies, specific for the organism in question in the patient's blood is evidence only that it has been present, not that it has been acting as a pathogen. The amount of help that a microbiology laboratory can give to a clinician depends largely on what it receives, as has been said of the computers 'Garbage in, Garbage Out'. The laboratory needs careful and well informed selection of the right specimens. If in doubt about this, it is wise to ask the laboratory staff, this often saves time and money, and avoids the tragedy of discovering too late what should have been done. Proper collection of specimens whenever possible this should be done before antimicrobial treatment is given. And meeting all criteria mentioned in the first article of the series published last month. The specimen is always a major infectious hazard, nearly every specimen sent to a diagnostic microbiology laboratory may contain pathogenic microorganism and is therefore potentially hazardous to the one who collects it, to those who carry it and to the laboratory staff. The degree of hazards varies greatly. Numerous reports have highlighted the hazardous nature of blood and other fluids from hepatitis B carriers and AIDS patients. However, specimens from patients who are unsuspected sources of such organisms are equally dangerous, and so all microbiological specimens must be treated with due care, further more it is important to remember that a blood sample is no less dangerous when sent to a Biochemistry, Haematology or other laboratory than when Microbiological Investigations are requested: The following guidelines should be observed:

1. When collecting specimens form high risk patients, disposable gloves should be worn and other special precautions maybe appropriate.
2. Specimens should be securely enclosed in protective containers, and fluid specimens should be in properly closed leak proof containers preferably plastic.
3. Care must be taken to prevent contamination of the outside of the containers.
4. Ideally in all cases, and certainly when there is any special hazard, the container should be enclosed in a sealed plastic bag for transmission. The request form should never be wrapped round the container or enclosed in the same plastic bag, bags with two compartments one for the specimen and one for the form, are best.
5. Any known special hazard e.g. of hepatitis B or AIDS should be indicated by agreed colour markings on the specimen and the request form.