Collection of Herpes Simplex (HSV) Culture Specimens

What You Will Need

• **Universal Viral Transport Media**, M4, M5 or any other liquid Viral Transport Medium – Conical tube with pink fluid (tissue culture based intended to stabilize viruses during transport, controlling mycotic and bacterial overgrowth). Available from the laboratory. Store at 2-25 °C **Note: Do not use if cloudy, yellow or expired.**
• Sterile Dacron swab. **Do not use calcium alginate wire swabs or wooden shafted swabs.**
• Sterile syringe/needle, if aspirate is to be obtained.
• Biohazard bag
• Refrigerator or wet ice

How to Do It

• **Special specimen collection requirements:**
  Proper collection and handling of patient specimens are the most important factors in successful HSV detection.
  ♦ Personnel should be trained in collection and culture techniques and follow appropriate barrier precautions.
  ♦ Avoid the production of aerosols during collection.
  ♦ Collect the specimen during peak infectivity, ie. acute phase.
  ♦ Collect in a manner which ensures greatest amount of virus.
  ♦ Avoid the collection of patient blood, (blood can inhibit the growth of the virus and the cell culture), and contamination from adjacent areas.
  ♦ Avoid creams, lotions, ointments, alcohol, Betadine, or a recent sitz bath which may reduce viable virus yield significantly, prior to collection, or report to the physician when the site is sampled.
  ♦ Label specimens properly with the patient’s name and a second identifier (date of birth or acct.#), time, date and detailed source information.
  ♦ Complete the requisition to include detailed source and proper test request.
  ♦ **Store all specimens for viral culture in a biohazard bag refrigerated at 2-8° C!**

• **Procedure for Specific Specimen Sites:**
  ♦ Lesions and/or vesicle fluid:
    ⇒ If possible, aspirate vesicle fluid with a syringe with a 26-27 gauge needle then expel into transport media. For ulcerated lesions, use a sterile cotton or Dacron swab to remove and discard pus without disrupting the lesion base, Use a fresh sterile collection swab dipped in viral transport medium to vigorously swab the lesion base to obtain cells. Break off swab into transport media. Crusted lesions should have the crust removed and discarded by lifting the crust from the lesion with a sterile needle, then collected as an ulcerated lesion.
  ♦ Amniotic fluid/Body fluid:
    ⇒ Submit the entire specimen in sterile tube(s) for optimal concentration.

  ♦ **CSF : Order HSV PCR instead!**
⇒ (In the case of encephalitis when a biopsy is not available) collect 2 ml from adults and 1 ml of CSF from infants and children, if possible. Submit CSF specimen ASAP.

♦ Eye exudates:
⇒ Rub palpebral conjunctiva with sterile cotton or Dacron swab and immediately break off into viral transport medium. Refer to Eye Specimen Collection Procedure.

♦ Tissue/biopsy specimens:
⇒ Submit entire specimen in sterile container to the lab as soon as possible.

♦ Newborn cultures (asymptomatic children/mothers with lesions):
⇒ Collection must be done as soon after birth as possible before bathing. The specimens may be pooled to save cost if necessary using pre-moistened cotton or Dacron swabs on the following acceptable sites:
  • Conjunctiva
  • Mouth
  • Nasal
  • Throat or NP
  • Rectal
  • Deep surface (ear or skin fold) - last choice

♦ Sputum:
⇒ Mix well and pipet ~5 drops of a representative portion of the specimen, or use a swab to inoculate the tube of transport medium.

♦ Blood: (not recommended)
⇒ Use heparinized tubes for collection of blood. Keep tubes cold (2-8°C) and transport within one hour of collection. (tubes will be centrifuged and the buffy coat will be used to inoculate the culture).

• Important notes about the Transport medium:
⇒ The transport medium must be red to pink. If yellow or expired, DO NOT USE!! Obtain a new collection kit from Microbiology.
⇒ To preserve infectivity of virus, place swabs and small amounts of aspirate (not CSF) immediately into the Universal Viral Transport Medium provided by the University of Colorado Health Laboratories.
⇒ Store at 2-8°C for best recovery within 48 hrs., or at or below -70°C for longer storage.
⇒ The Universal Viral Transport Media is also acceptable for PCR testing.

Where to Take It

Refrigerate or keep on wet ice at 2-8°C and transport to University of Colorado Health Laboratories.