Bordetella pertussis culture

Whooping cough is a highly contagious disease that is caused by the fastidious Gram-negative coccobacillus Bordetella pertussis. In some cases this syndrome may also be caused by Mycoplasma pneumoniae, and by viruses such as adenoviruses and enteroviruses. It is advisable to take two pernasal swabs: one for the culture of Bordetella species and the other for viral culture; however nasal swabs for PCR are preferred.

General information

Collection container (including preservatives): A pernasal swab (Dacron™ with flexible wire shaft)

Specimen type:

Collection: A pernasal swab (Dacron™ with flexible wire shaft) is inserted through a nostril and advanced along the floor of the nose until it reaches the nasopharynx. It has been suggested that the swab be held against the posterior nasopharynx for up to 30 seconds or until the patient coughs. In practice, it is more likely that a patient will only be able to tolerate this for a few seconds

Specimen transport: Collect using a blue top pernasal swab with charcoal Amies and transport in sealed plastic bags. If processing is delayed, refrigeration is preferable to storage at ambient temperature. Delays of over 48hr are undesirable.

Minimum volume of sample: Not applicable

Special precautions: Pertussis serology is usually more useful in adults presenting with a prolonged cough. PCR on pernasal swabs or nasopharyngeal aspirates is now also available for the diagnosis of B. pertussis infection.

Laboratory information

Measurement units: Not applicable

Turnaround time: 7 working days

Clinical information

Clinical decision points: Not applicable

Factors known to significantly affect the results: Pernasal swabs

The only swab fibre recommended for diagnosis of whooping cough is Dacron™. *B. pertussis* has a stronger affinity for Dacron™ than for plain cotton wool or for treated cotton wool and its use improves recovery of the organism. It is also less inhibitory for PCR techniques.

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