SPECIMEN COLLECTION

PART 4 – OBTAINING A NASAL SWAB

AUTHOR Dan Higgins, RGN, ENB 100, ENB 998, is senior charge nurse in critical care, University Hospital Birmingham.

This article, the fourth in a six-part series on specimen collection, details how to obtain a nasal swab. Specimen collection is the process of obtaining tissue or fluids for laboratory analysis or near patient testing. It is a first step in investigating the nature of disease determining diagnosis and mode of treatment (Dougherty and Lister, 2004).

The process must be one that reduces health and safety risk to those handling the sample and reduces the risk of erroneous data and/or results. The employment of practices such as universal infection control procedures as outlined by the RCN (2005a) are required.

SPECIMEN COLLECTION

The following principles are fundamental to good practice in specimen collection. The specimen must:

- Be appropriate to the patient’s clinical presentation;
- Collected at the right time;
- Collected in a way that minimises the risk of contamination;
- Collected in a manner that minimises risk to all staff (including laboratory staff);
- Collected using the correct tools;
- Documented clearly, along with the sampling process;
- Stored/transported appropriately.

OBTAINING A NASAL SWAB

Nasal swabs are commonly used to detect the presence of organisms such as Staphylococcus aureus. This is a ubiquitous organism that commonly colonises the skin, particularly the nose, skin folds, hairline, perineum and navel. It usually survives in these areas without causing infection – a state known as colonisation. A patient becomes clinically infected if the organism invades the skin or deeper tissues and multiplies (RCN, 2005b).

Certain strains of Staphylococcus aureus have developed and continue to develop further resistance to antibiotics. An example of this is MRSA, which has developed resistance to a range of antibiotics. Thus along with swabs from other areas such as skin lesions/drain, nasal swabs can form part of a generic MRSA screen.

Nasal swabs are also collected to detect the presence of respiratory viruses/infection as the sensitivity is comparable with...
nasopharyngeal aspirates for certain viruses (Heikkinen et al, 2002).

Traditional methods of processing a nasal swab specimen, in particular to detect the presence of Staphylococcus aureus or its antibiotic-resistant forms are time-consuming.

This means that a patient may be receiving care 24–48 hours prior to identification of any harmful organisms. However, technological advances mean that these organisms can be identified quickly and treatment commenced earlier. It must be reinforced that all patients should be treated using universal infection control precautions to minimise risk to staff and other patients.

Gaining informed consent from the patient before obtaining a nasal swab will require that she or he knows what the specimen is being taken for. Nurses should be aware of patients’ increased awareness of infection issues particularly related to MRSA and be aware of the anxieties that the process of obtaining a sample can create.

Equipment required
Gather together the equipment needed to obtain a nasal swab:
- Gloves;
- Apron;
- Swab/specimen collection device;
- Appropriate documentation.

The procedure
- Obtain informed consent from the patient. Answer any questions and allay any anxieties that the patient may have.
- Wash hands thoroughly. Apply apron and don gloves.
- Open swab packaging, checking expiry date (Fig 1).
- Remove swab from packaging, moisten with sterile water if required (to prevent any discomfort to the patient (Dougherty and Lister, 2004) (Fig 2).
- Insert the swab into the anterior nare (nostril) (Fig 3).
- Sweep upwards towards the top of the nare (Fig 4).
- Repeat the procedure with the same swab in the other nare.
- Without contaminating swab, place in the culture medium provided (Fig 5).
- Provide the patient with tissues as required.
- Dispose of waste.
- Remove apron and gloves.
- Wash hands.
- Complete the appropriate documentation, specimen tube, accompanying form and nursing notes (Fig 6). In some organisations culture and sensitivity and MRSA screen are separate tests, therefore be clear what investigation is required.
- Dispatch sample according to organisation policy.

REFERENCES

NEXT WEEK
Specimen Collection 5: Obtaining a sputum sample