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**BRONCHOALVEOLAR LAVAGE**

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Bronchoalveolar lavage (BAL) is a medical procedure in which a bronchoscope is passed through the mouth or nose into the lungs and fluid is squirted into a small part of the lung and then collected for examination.

Indications:

* bronchoalveolar lavage is typically performed in patients with

non-resolving pneumonia;

* diffuse lung infiltrates (interstitial and/or alveolar);
* suspected alveolar hemorrhage;
* quantitative cultures for ventilator associated pneumonia;
* infiltrates in an immunocompromised host.

Equipment used in BAL: flexible bronchoscope, sterile collection trap, suction tubing, sterile saline, vacuum source, syringe, optional 3 way stop-cock, lidocaine 1-2%.

Techniques in bronchoaveolar lavage. Plan to perform the BAL preceding any other planned bronchoscopic procedure to avoid specimen contamination.

– Avoid suctioning prior to obtaining BAL specimen.

– Minimize use of topical anesthesia as there may be bacteriostatic effects of

lidocaine.

* Typically, we use the minimum amount of 2% lidocaine topically

– Advance bronchoscope until wedged in a desired subsegmental bronchus at the desired location.

– Infuse 20mL of saline with a syringe, observing the flow of saline at the distal tip

of the bronchoscope.

– Maintaining wedge position, apply gentle suction (50-80 mm Hg), collecting the lavage specimen in the collection trap.

Repeat steps 5 and 6, up to 5 times as needed (total 100-120 mL), to obtain an adequate specimen (40-60 mL - usually 40-70% recovery of total instillate).

* Observe for flow of bubbles returning from the alveolar space.
* Gentle re-orientation of bronchoscope tip may allow better return of fluid.

– Reduction in pressure or intermittent suctioning may help with distal airway collapse.

– Instructing the patient to inhale and exhale deeply may also help improve return of specimen.

BAL specimen should be processed as soon as possible with desired tests ordered. Patient should be observed for a minimum of 1 hour after the procedure, with continued monitoring.

Complications: No complications up to 95%. Cough, transient fever and chills (2.5%), bronchospasm (1%).