READING BRONCHOALVEOLAR LAVAGE (BAL) / BRUSH CULTURES

PURPOSE BAL / Brush cultures are evaluated for the presence of potential pathogens causing pneumonia.

SCOPE This procedure is to be used with the M403 Microbiology Augmentation Set.

PROCEDURE

STEP	ACTION
1	BAL specimens are plated to Blood agar plate (BAP), Chocolate agar plate (CAP), and MacConkey agar plate (MAC) and incubated in CO_2 at 35° C. Cytospin smears are prepared. Refer to Processing SOP for BAL procedure.
2	BAL specimens are **always** cultured regardless of Gram stain result.
3	Plates are examined after 24 hours incubation to correlate growth on plates with organism(s) seen on primary Gram stain. Due to oropharyngeal contamination BAL specimens will frequently contain organisms consistent with normal respiratory flora. Organisms commonly isolated aerobically from BAL cultures which are considered to be **normal flora include,** alpha and non-hemolytic streptococcus, non-pathogenic Neisseria sp., Corynebacterium sp., coagulase negative staph., and Micrococcus sp.
4	When examining BAL culture plates compare the balance of normal flora in relation to other organisms that may be potential pathogens. In addition, organisms identified as potential pathogens on the culture should reflect any organisms associated with pulmonary material on Gram stain.
5	If there is an obvious discrepancy between the Gram stain and the culture then the Gram stain must be reviewed. If the discrepancy still exists a consult with the OIC or NCOIC. eg. If gram positive cocci in singles, pairs, and chains are reported as predominant on the Gram stain and alpha strep is growing on the culture, then the alpha strep should be screened for S. pneumoniae. Whether or not

	the alpha strep identifies as S. pneumoniae the Gram stain is considered to agree with the culture.
6	Refer to Sputum Cultures for workup of potential pathogens from BAL cultures.

RESULTS

STEP	ACTION
1	If normal flora is present in low quantities it may be reported as such: eg. “Reduced normal respiratory flora”, or in some cases, “No normal respiratory flora with .....”.
2	If culture is less than 24 hours old then reincubate plates and report as: “Less than 24 hours old, further reincubation required”. Cultures with growth that are less than 24 hours old are described according to the growth present. If a less than 24 hour old culture cannot be accurately evaluated report as: “Less than 24 hours old, further incubation required.”
3	If no growth occurs after 48 hours incubation then report as: “No growth at 48 hours.”

REFERENCES

Howard, Barbara J. Clinical and Pathogenic Microbiology, Washington, D.C.: C.V. Mosby., 1994 pp. 50-51/ 235.