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Material quality of bronchoalveolar lavage

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Introduction

Bronchoalveolar lavage is a gold standard in evaluation of diffuse parenchymal lung diseases, but to use this method in daily practice, the quality of material needs to be good, otherwise the results could be interpreted falsely. In qualitative bronchoalveolar lavage: recovered fluid volume need to be more than 30% from injected volume and the total cell count need to be more than 300 cells.

Aim

The purpose of the study was to detect how many of the performed bronchoalveolar lavage are of sufficient quality to be examined for diagnostic goal.

Methods

In this study, retrospective data from 88 materials of bronchoalveolar lavage during bronchoscopy were collected. Filled fluid volume and percent of its withdrawn was analysed following the bronchoscopy protocol. Bronchoalveolar lavage was sent for evaluation in laboratory, where cells were counted. Bronchoalveolar lavage retrieved fluid volume and total nucleated immune cell count were analysed to obtain information about quality of procedure.

Results I

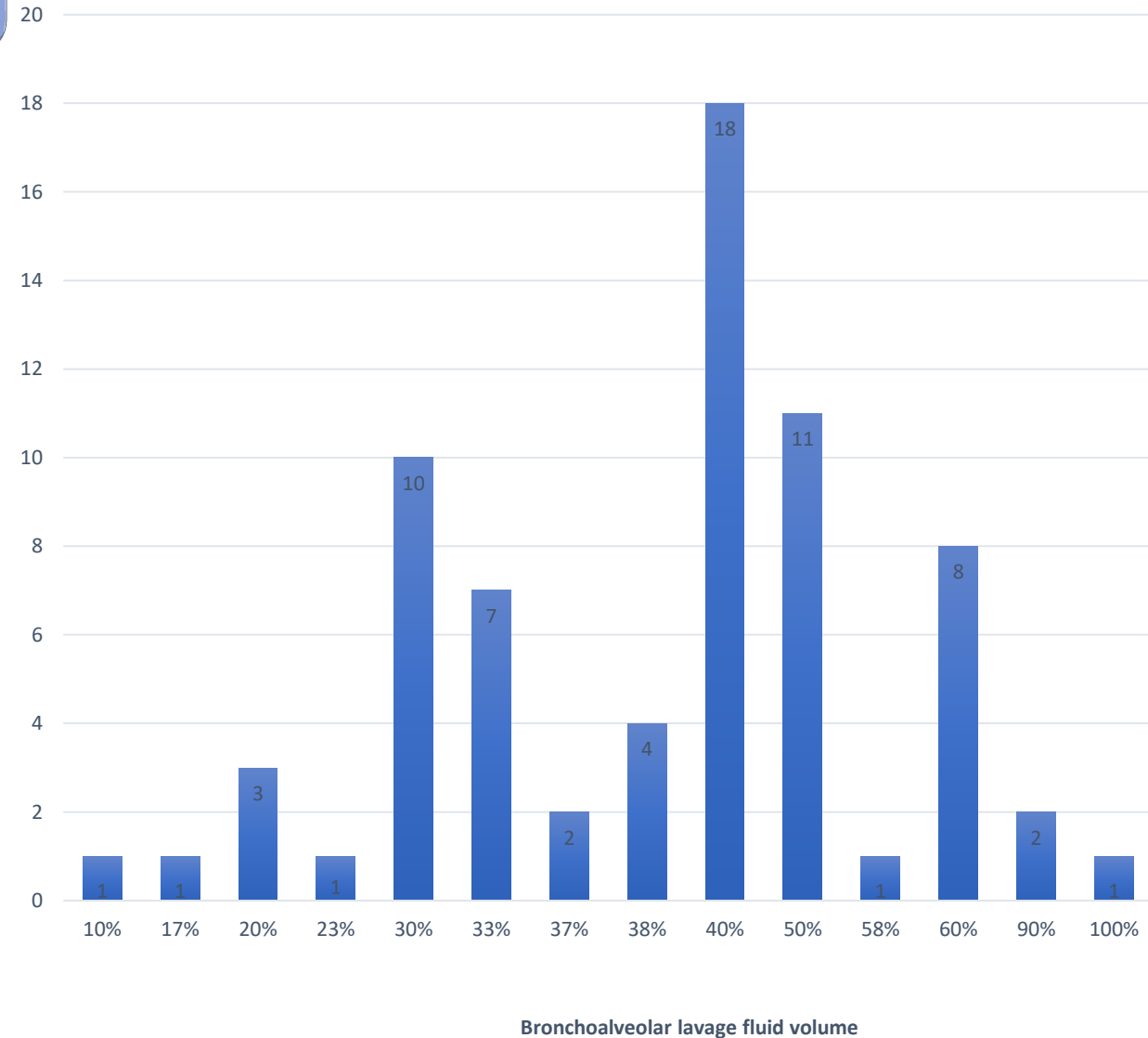
88 bronchoscopies with bronchoalveolar lavage were made

70 (80%) cases were known difference between injected and recovered fluid volume.

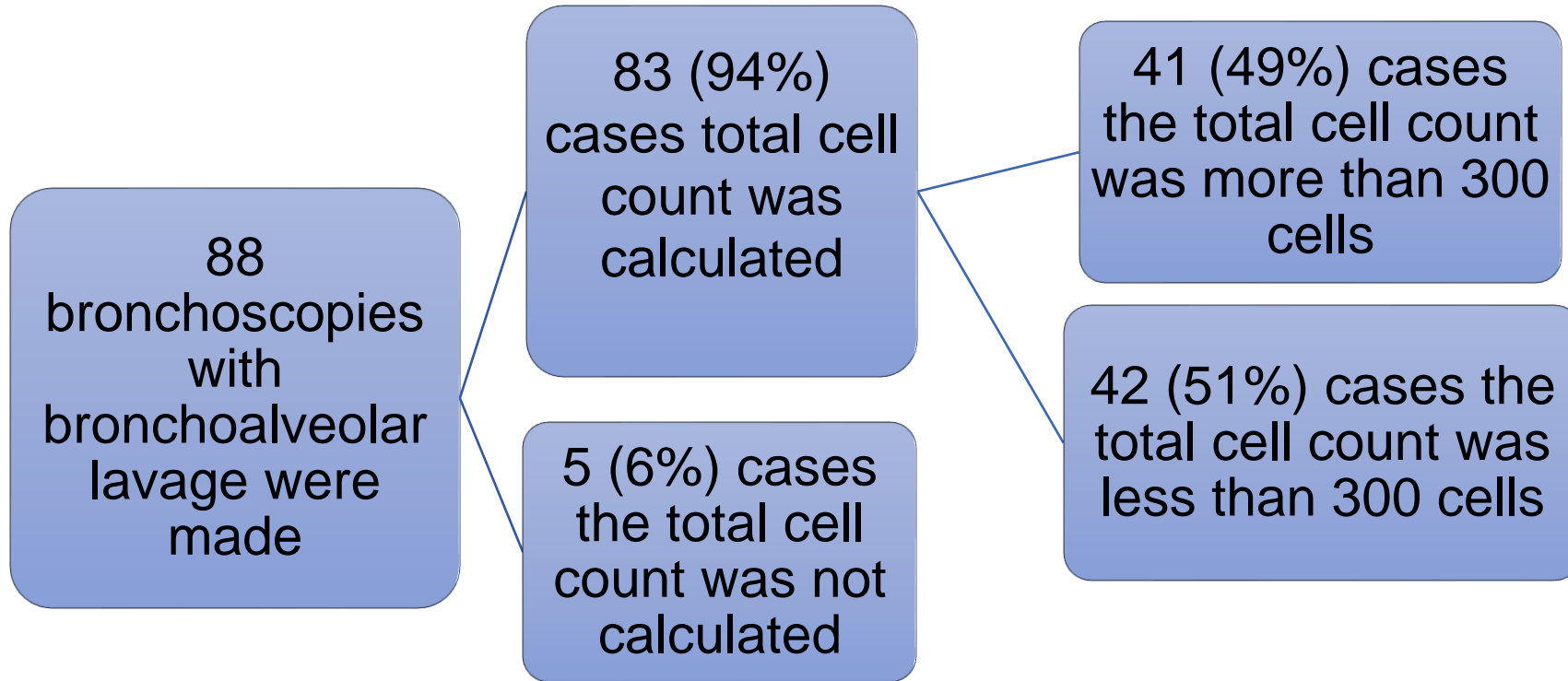
18 bronchoscopies protocols were filled not fully

Only in 6 (9%) cases the withdrawn volume was less than 30%, which can be misleading factor in cell differential counts.

There was no significant correlation between the percentage of withdrawn fluid volume in patients with diffuse parenchymal lung diseases or with other disease.



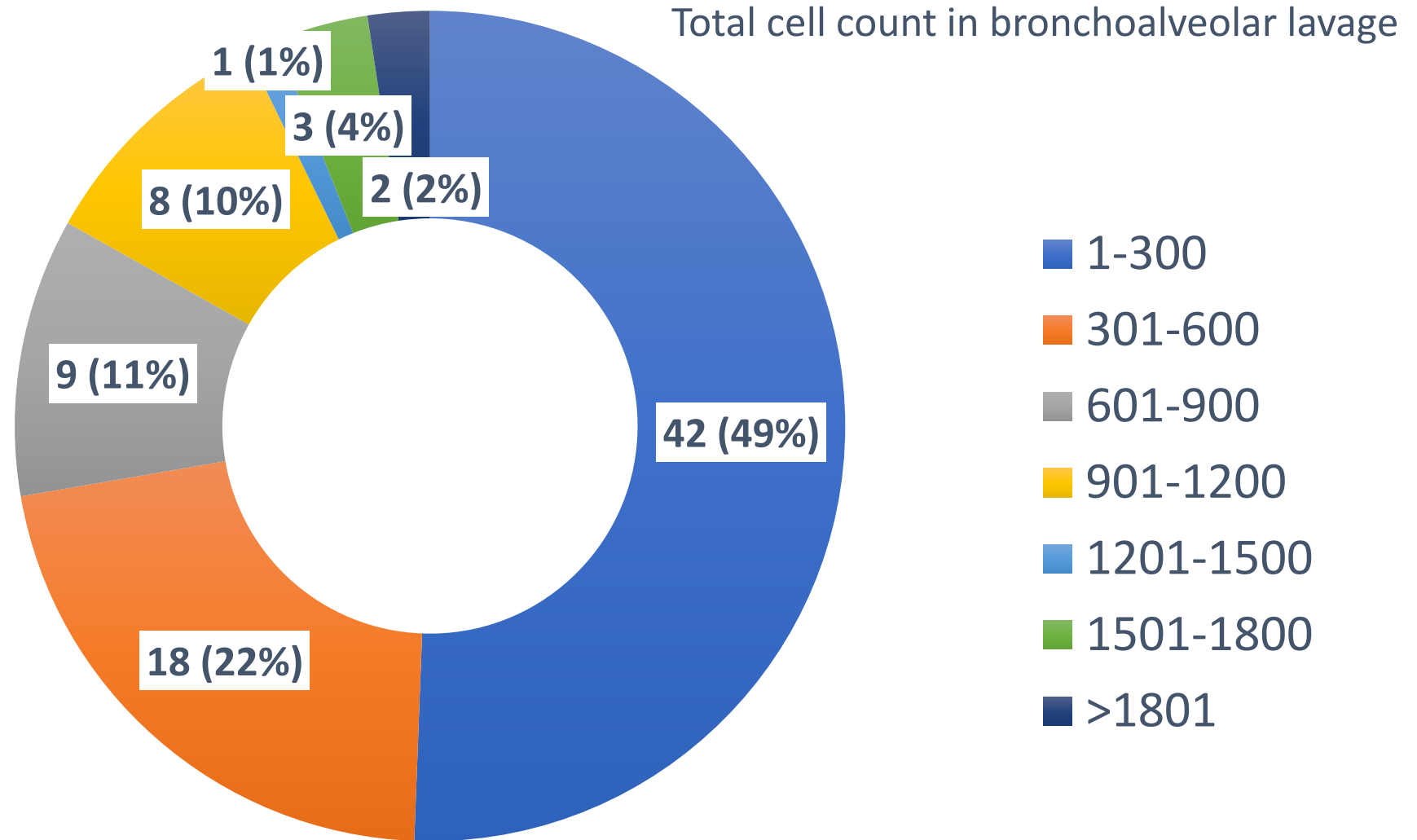
Results II



- There was no significant correlation in total cell count in bronchoalveolar lavage between patients with or without diffuse parenchymal lung diseases.

Results III

- To summarise, both quality parameters in 17 (19%) cases lacked information about both data parameters, but good material was only in 36%.



Conclusion

To use bronchoalveolar lavage as diagnostic tool, the quality of this method needs to be good. The current study demonstrated that only 36% of the cases were with a good withdrawn fluid volume and sufficiently high total immune cell count. To identify causes of low-quality lavage, further investigation is needed.



Thank You for attention! Questions?