## 14. NASOPHARYNGEAL ASPIRATE VALUE IN THE DIAGNOSTIC OF ACUTE RESPIRATORY INFECTIONS IN SMALL CHILDREN

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**Introduction.** The diagnosis of the etiological agent of acute respiratory infections plays a key role in ensuring the most appropriate and effective therapies for pediatric patients and is fundamental for guiding prevention strategies. In most cases, sputum is not collected for microbiological diagnosis in children. One of the limitations of this diagnostic technique is the young pediatric age, due to the impossibility of the sputum expectoration. An alternative method, widely used to identify viral/bacterial etiology in pediatric respiratory pathology, is the nasopharyngeal aspirate technique, which allows the detection of not only the causative agent in most respiratory infections but also colonisation. Nasopharyngeal aspirates are generally superior to swabs.

**Aim of study.** Nasopharyngeal aspirate is a diagnostic tool used for the etiological detection of respiratory pathogens; the procedure involves collecting secretions from the nasopharyngeal area using, technically, a suction source. It's a painless technique, applicable to infants and young children. The procedure is simple to perform, it takes a relatively short time, it’s useful in detecting bacterial / viral etiology, carriage and detection of bacterial susceptibility. It is essential to note that colonisation of the nasopharynx is a first step towards the development of respiratory bacterial infections.

**Methods and materials.** A total of 105 children were enrolled during the study period. Pediatric patients were from ≥ 8 weeks to 5 years, hospitalised within the Mother and Child Institute and the Municipal Children's Clinical Hospital No. 1 from Chisinau, who showed acute respiratory symptoms and who were not given antibiotic therapy previous this hospitalisation. Obtained informed consent, nasopharyngeal aspirates were collected after 72 h after the onset of the first catarrhal symptoms and no later than 7 days after the onset of the acute respiratory episode. Data analysis was performed using the Microsoft Excel 2010 calculation program. Descriptive data were presented as a percentage.

**Results.** The mean age at presentation was 18 ± 1.27 months. There were 49.52% of boys, with Boy / girl ratio = 0,98 /1. Of the 105 samples analysed, 83 (79%) were positive for bacterial infection. Moraxella Catarrhalis was detected as the predominant bacterial agent for colonisation of the nasopharynx in about 33%. S. aureus was highlighted in 30% of cases, and in 19% of cases S.Dysgalactiae groups C and G were detected. The spectrum of respiratory etiology preventable by vaccination noted S. pneumoniae in 4,2% of cases and H. influenzae in 4,2%, at the same time were noted in small titers, suggesting carrier status highlighting a potential risk of invasive infection.

**Conclusion**. The nasopharyngeal aspirate technique increases the diagnostic yield of respiratory bacterial etiology. In the Republic of Moldova this technique is not widely used, its implementation as a diagnostic tool would favour both therapeutic management and would contribute to combating the phenomenon of antibiotic resistance.