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# USE OF THE CYTOLOGICAL METHOD OF LIQUID PHASE IN NASAL CYTOLOGY

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In case of rhinitis the diagnosis requires a precise diagnostic procedure and is essentially based on the exclusion of allergies, infections or defects of the nose. The clinical di usion of nasal cytology has allowed recognizing the non-allergic rhinitis. Nasal Cytology allows identifying non-allergic cell-mediated rhinitis from neutrophils (NARNE), eosinophils (NARES) and mast cells (NARMA). The enrichment technique in the liquid phase also allows improving the quality of the sample making it easier to read by the pathologist. The poster describes the technique used to set up the samples and the results obtained.

## Biography

Gozzi Michela, born in 1973, obtained a degree in 1997 from the Faculty of Medicine and Surgery of Brescia in a Biomedical laboratory techniques with a score of 110/110 with honors. From 1997 to 2005 she worked at the Service of Pathological Anatomy of the Poliambulanza Foundation, then she worked as co-ordinator of the Cytology service of the OxigenLab medical analysis laboratory. From 2014 she started working as a freelance cytologist in the cytopathology service of the Clinical Institute of the City of Brescia.

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**NASAL CYTOLOGY: OUR EXPERIENCE**

With nasal cytology, an accurate study of the pseudostratified epithelium of nasal mucosa is possible. The aforementioned study recognizes the presence and the different distribution of cellularity, to be proposed in a rhinocytogram in view of a correct evaluation of the inflammatory state of the nasal mucosa.

**Epithelial cellularity present in the nasal mucosa**

**Legend:**  
Ciliated cells  
Mucus cells  
Basal cells  
Striated cells

**RHINOCTOGRAM:**

Ciliated cylindrical cells: .....  
Muciparous globet cells: .....  
Striated cells: .....  
Basal cells: .....  
Neutrophils granulocytes: .....  
Eosinophils granulocytes: .....  
Mastocytes: .....

Comment: .....

Same explanatory examples  
Sampling and preparation methods  
Clinical framework of the problem

**Clinical notes:**  
Thin smears: a transparent preparation with upper left oblique deflection and tendency to collection of the nasal mucus of the cells, the presence of the previously operated of "enrichment" used with usual preparation made from previous tissues.

**Legend:**  
Muciparous cells  
Ciliated cells  
Basal cells  
Striated cells  
Granulocytes eosinophilic  
Terminology neutrophilic

**Legend:**  
Ciliated cells  
Mucus cells  
Basal cells  
Striated cells  
Neutrophils granulocytes  
Eosinophils granulocytes  
Mastocytes

**Methods of sampling and preparation of smears**

The sampling methods used by various author are different. What we use is simple and consists of scraping carried out at the level of the nasal mucosa, bilaterally, at the inferior turbinate.

**Material used:**  
In a first sampling with cytobrush, 3 glasses with traditional smears are prepared for coloring according to MGG. The brush is immersed in preservative liquid for subsequent enrichment in the liquid phase, in order to obtain at least 2 glasses for coloring, with E.E. and Papanicolaou.

The liquid phase method is particularly useful for obtaining abundant cellularity arranged in a single layer.

**Glass preparation:**  
1. traditional glass preparation for smears (MGG, Papanicolaou, E.E.).  
2. in liquid phase (Papanicolaou, E.E.).

The liquid phase procedures provide for an enrichment of the material using:

- filter system or centrifugation
- by filters: Thin Prep (TP), SurePath
- by cytocentrifugation: Cytifast, Papanic

A New Liquid-Based Cytology Technique  
Biagio Biagio, Mariano Berthone and Ah.  
Acta Cytol 2003;47:149-153

**Clinical classification of the problem**

The classification of the rhinitis does not currently appear to be univocal and well defined and there are many advanced proposals. However nasal cytology represents a valid means of differential diagnosis between the various pathological situations suggested below and specially plays a fundamental role in the recognition and study of non-allergic non-IgE related vasomotor rhinopathy.

**A- Allergic rhinitis from hyper non specific nasal reactivity**  
**B- Non allergic idiopathic-vasomotor rhinitis**  
**C- Infectious-viral and bacterial**  
**Other - iatrogenic, hormonal and from mechanical causes .**

**Vasomotor rhinitis**

- allergic or specific
- non allergic aspecific
- hormonal
- iatrogenic
- neurodistonic
- occupational
- with cellularity : N.A.R.NE, N.A.R.E.S, N.A.R.MA, N.A.R.ESMA

**Classification of rhinitis:**  
I- infectious  
II- allergic  
III- non allergic  
IV- other causes

**New nosological entities:**  
Chronic non-allergic mediated cell not Ig-E  
N.A.R.NE: chronic non allergic rhinitis **neutrophilic**  
N.A.R.E.S.: chronic non allergic rhinitis **eosinophilic**  
N.A.R.MA: chronic non allergic rhinitis **mastocytic**  
N.A.R.ESMA: chronic non allergic rhinitis **eosinophilic and mastocytic**

**the rhinitis once classified as non specific are now placed in the allergic vasomotor rhinitis "**