Nasal Morphology and Nasal Patency in Leprosy Patients

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- Leprosy is a chronic infectious disease caused by Mycobacterium leprae.
- Morphological nasal changes only occur in multibacillary leprosy. The systemic form of the disease.
- Nose manifestations can be early, intermediate and late ones. Early manifestations include infiltration of mucosa and abnormal drying. Infiltration grows causing intermediate manifestations such as nasal obstruction, an increase on nasal secretion and raising crusts. And in the late manifestations we find the development of a ulcer secondary infection, and bone and cartilaginous resorption.
- World Health Organization recommends a multi-drug therapy protocol: Rifampicin 600 mg once a month, Dapsone 100 mg daily, Clofazimine 300mg once a month and 50 mg daily. Duration= 12 months

OBJECTIVES:
To assess the impact of multidrug leprosy therapy on the development of nasal deformities and nasal airway patency.

Evaluate the nasal morphology and nasal patency in leprosy patients treated with the multidrug therapy in comparison with patients treated with 1-drug therapy and a group of healthy volunteers.

METHODS:
In an overall group of 84 patients studied, 38 were treated with a therapy based on a single drug, and 22 were treated with multidrug therapy, while 24 subjects formed a control group. We used anterior rhinomanometry to analyse the morphology of the nose. We measured the nasal inspiratory and expiratory resistance of the right and left nostrils and total nasal inspiratory and expiratory resistance at a transnasal pressure of 150 Pa. by using active anterior Rhinomanometry. The statistical analysis was carried out using the Varianza analysis.

RESULTS:
The nasal structures in the 1-drug therapy group underwent bone and cartilaginous resorption with an increase in nasal resistances. We found significant statistical differences between the resistance values obtained in this group and the control group (p<0.05). In The multidrug therapy group, the morphology of the nose remains as in healthy patients. No significant statistical differences were found between the resistance values obtained in the multidrug therapy and the control group (p>0.05).

CONCLUSIONS: The Multidrug therapy prevents developing nasal deformities and maintains a normal nasal airflow.

RHINOMANOMETRY RESULTS

<table>
<thead>
<tr>
<th>Rhinomanometry was performed to patients without septal perforation</th>
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<tbody>
<tr>
<td>Control n=24</td>
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<tr>
<td>Total Inspiratory Resistance (Pa)</td>
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<tr>
<td>Right Inspiratory Resistance (Pa)</td>
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<tr>
<td>Left Inspiratory Resistance (Pa)</td>
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<tr>
<td>Total Inspiratory Nasal Resistance (Pa)</td>
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<td>Right Inspiratory Nasal Resistance (Pa)</td>
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<td>Left Inspiratory Nasal Resistance (Pa)</td>
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(a) Significant statistical differences with the control group.
(b) Significant statistical differences with the Multitherapy group.

CONCLUSIONS
These results confirm that NO significant changes in nasal morphology and nasal respiratory function were found in patients treated with MDT

The multi-drug therapy protocol has allowed leprosy patients following this strategy to achieve complete recovery without developing sequelae or deformities.

REFERENCES