CONTINUING MEDICAL EDUCATION EXAMINATION

Allergen-Specific Nasal Provocation Testing

Instructions to obtain 0.5 Continuing Medical Education Credits

These credits can be earned by reading the text and taking this CME examination online through the SEAIC web site at **www.seaic.es.**
The questions should be answered within 6 weeks from the publication of the examination.

"Actividad acreditada en base a la encomienda de gestión concedida por los Ministerios de Sanidad y Política Social y Ministerio de Educación al Consejo General de Colegios Oficiales de Médicos con 0,5 CRÉDITOS, equivalentes a 3 horas lectivas"

"This activity is accredited with 0.5 credits (equivalent to 3 teaching hours). These credits have been acknowledged by the EUROPEAN ACCREDITATION COUNCIL FOR CME (EACCME) FROM THE EUMS"

Activity sponsored by Astra Laboratories

CME Items

1. When is specific nasal provocation testing indicated?
   a) When discrepancies arise or difficulties exist in the assessment of a patient's medical history and in the results of skin and/or serological tests.
   b) In the etiologic study of occupational respiratory diseases of allergic origin.
   c) In the follow-up and monitoring of clinical response after the administration of specific immunotherapy.
   d) In research into the pathophysiological mechanisms of nasal response to allergens.
   e) All of the above.

2. The initial allergen concentration applied in specific nasal provocation testing will depend on all but one of the following:
   a) The patient's sensitivity.
   b) The local environmental pressure of the allergen.
   c) The characteristics of the extract.
   d) The expiry date of a commercial extract.
   e) The potency of the extract.

3. Which answer is correct with regard to application of the allergen?
   a) The allergen can be applied unilaterally or bilaterally.
   b) Unilateral application is considered to be more physiological.
   c) Bilateral application should be reserved for research studies.
   d) The evaluation of the nasal response should always be unilateral.
   e) The evaluation of the nasal response must be bilateral only in cases of intense rhinorrhea.

4. Nasal provocation testing is not recommended
   a) During pregnancy.
   b) In patients with uncontrolled asthma.
   c) In patients with septal perforation.
   d) In patients with very intense nasal obstruction.
   e) All of the above.

5. Which one of the following is not a cause of false-positive results in the nasal provocation test?
   a) Infectious process in the previous 2-4 weeks.
   b) Atrophic rhinitis.
   c) Excipients such as phenol, glycerol, or benzalkonium chloride.
   d) High allergen concentration.
   e) Active allergic process in the previous 2-4 weeks.

6. In the assessment of nasal airflow with the measurement of nasal peak inspiratory flow
   a) The technique is difficult to perform.
   b) It is independent of lung capacity.
   c) There is a poor correlation between nasal peak inspiratory flow and the subjective sensation of nasal obstruction.
   d) Nasal peak inspiratory flow does not correlate with airway resistance.
   e) The use of nasal peak inspiratory flow may be difficult in cases of intense rhinorrhea.

7. In a positive nasal provocation test with allergen
   a) Nasal nitric oxide levels increase immediately, returning to baseline at 4 hours.
   b) Nasal nitric oxide levels increase immediately, and remain high for 24 hours.
   c) There is an immediate decrease in nasal nitric oxide levels that coincides with maximal symptom intensity.
   d) There is a decrease in nasal nitric oxide levels beginning 24 hours after provocation.
   e) Compared to placebo, a positive nasal provocation test with an allergen does not produce any change in nasal nitric oxide levels.

8. When assessing nasal provocation
   a) Optical rhinometry is a spectroscopic technique for assessing edema of the nasal mucosa.
   b) Rhinomanometry is a useful technique in cases of severe polyposis.
   c) Acoustic rhinometry should not be performed in cases of severe nasal obstruction.
   d) Quantification of rhinorrhea is an easy and reproducible technique.
   e) Acoustic rhinometry is useful for studying the resistance of the nasal cavity.

9. In assessment of inflammatory changes after a positive nasal provocation test
   a) Histamine, tryptase, prostaglandin D_2, leukotriene B_4, and leukotriene C_4 concentrations are increased.
   b) Eosinophil levels of the nasal irrigation fluid are increased.
   c) Local production of specific immunoglobulin E and inflammatory changes after a positive allergen nasal provocation test have recently been described in patients diagnosed with nonallergic rhinitis.
   d) There is an initial decrease in nasal nitric oxide attributed to mucosal edema.
   e) All of the above.

10. Which one of the following is not a positivity criterion for the specific nasal provocation test?
    a) A 25% reduction in the minimal cross-sectional area of the nasal cavity measured by acoustic rhinometry.
    b) A 25% reduction in the volume of the nasal cavity 2 cm to 6 cm from the nostril measured by acoustic rhinometry.
    d) A 100% increase in total airway resistance/airflow at 150 Pa measured by anterior rhinomanometry.
    e) A ≥40% reduction in airflow measured by nasal peak inspiratory flow.