

IgE – mediated occupational asthma due to morphine



CLÍNICA SUBIZA
CENTRO DE ASMA Y ALERGIA

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BACKGROUND

We have previously described cases of occupational asthma by CPA alkaloids (Concentrated of Poppy straw) without objectifying an IgE-mediated mechanism or occupational asthma due to allergy against proteins of *Papaver somniferum* seeds.

We describe, for the first time, a case of occupational asthma due to morphine allergy present in CPA.

METHODS

We present a 34-year-old male without respiratory symptoms backgrounds who started working as an operator working in the production of CPA.

After three months he began with nasal congestion, hydorrhea, ocular congestive symptoms and gradually progressing with wheezing and dyspnea. Despite a following treatment with high doses of inhaled corticosteroids and long action beta-agonists, he required in the last 3 months, oral corticosteroids and emergency assistance.

The patient improved his free days while not working.

Skin prick tests with an standard battery of inhalants and poppy seed extract (Lab. Immunotek) was performed and also a systemic blood test searching for total IgE and Morphine (Cap System) specific IgE.

An occupational asthma study was carried out:

Functional respiratory tests, bronchodilator tests, methacholine test, expiratory fraction of nitric oxide (FENO (NO Vario, Filt, Germany)) and an specific bronchial provocation test (sBPT) with an extract of dialyzed and non-dialyzed CPA (with Vilbiss Nebulizer 646).

RESULTS

Bronchodilation test: Positive, \uparrow FEV1 24% (650 mL).

Specific Bronchial Provocation test (sBPT) :

- Non-dialyzed CPA (1: 1,000 p / v): \downarrow FEV1 28% at 10 min

- Dialyzed CPA (1:10 p / v): \downarrow FEV1 30% at 5 min.

(When dialyzed, a concentration 100 times higher was necessary)

Methacholine test (PC₂₀ mg / mL):

- pre sBPT 0.4 - post sBPT 0.1

FENO (ppb): pre sBPT 13 and post sBPT: 30

Prick test: negative for inhalants and Poppy seeds.

Total IgE: 17.5 IU / mL.

Specific morphine IgE : 3.25 kU / L

(moderate positivity - class 2/6)



Papaver somniferum extract:

The seeds (which do not contain alkaloids)
The CPA (rest of the plant without seeds) from where they are extracted alkaloids

CONCLUSION

We described a case of occupational asthma due to IgE- mediated allergy to morphine present in the CPA.

