IMPACT OF SMOKING ON THE CUTANEOUS INFLAMMATORY RESPONSE IN ATOPIC DERMATITIS

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Aim: To assess the impact of active and passive smoking on atopic dermatitis severity by comparing clinical forms between exposed and non-exposed patients

Takeaway message: Prevention and education on the risks of passive smoking should be integrated into the management of atopic dermatitis

We declare that there is no conflict of interest

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- **Atopic dermatitis (AD)** [1]
  - **Chronic inflammatory dermatosis**
  - **Recurrent itching episodes**
  - **Impacts the quality of life (QoL) of patients**
- **In Madagascar** [2-3]**: 5.6 % of children and 0.5 % of adults**
- **The impact of smoking on AD remains debated**

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Objectives

1. To assess the impact of active and passive smoking on AD severity

2. To compare clinical forms between exposed and non-exposed patients

- Case-control study (January 2020 to November 2024)
  - Cases: Documented exposure to tobacco (active or passive)
  - Control: Absence of exposure to tobacco (active or passive)

- Exclude cases: Patients refusing participation or consent
- Variables: atopic history, clinical symptoms, severity (SCORAD), quality of life (DLQI)
- Patient medical records and questionnaires to document tobacco exposure and quality of life
- Our study was conducted in compliance with patient confidentiality

Patients characteristics

- 106 patients included
- Mean age: 9.8 years (± 4.3), mostly pediatric cases
- 88.7% of exposed = Passive smokers (mainly at home)
- Minority were active smokers (11.3%)
- Atopic history more common in exposed group (71.7% vs. 41.5% in controls)
- Family atopy: slightly more frequent in exposed (54,71%)

53 exposed

VS.

53 non- exposed

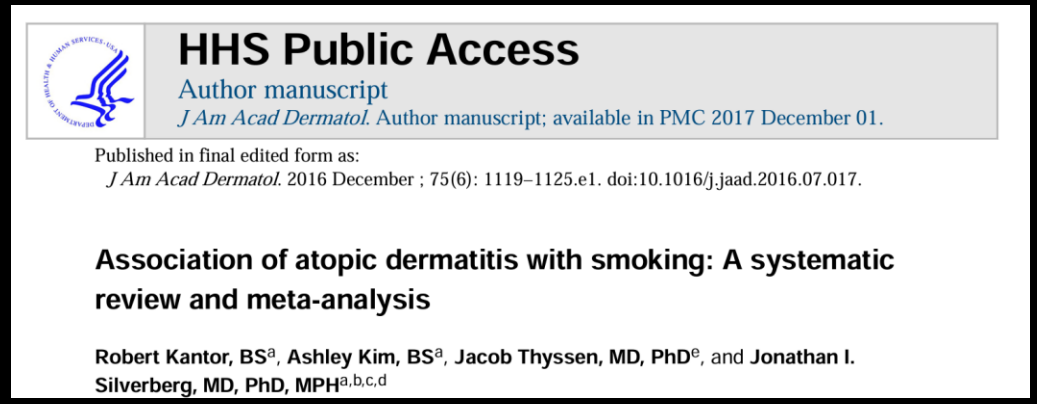
Variable	Exposed n=53(%)	Non-exposed n=53(%)	OR (IC95%)	*p-value*
Personal history of atopy	38 (71.7%)	22 (41.5%)	3.57 (1.59, 8.02)	*0.0031*
Prutitus	49 (92.45)	43 (81.13%)		
Sleep disturbance	24 (45.0%)	14 (26.0%)	2.31 (1.02, 5.21)	*0.0677*
Mild AD	12 (22.6%)	35 (66%)	0.15 (0.06, 0.36)	*<0.0001*
Moderate AD	30 (56.6%)	15 (28.3%)	3.30 (1.47, 7.41)	*0.0057*
Severe AD	11 (20.8%)	3 (5.7%)	4.37 (1.14, 16.69)	*0.0416*
QoL worsening due to tobacco	28 (52.8%)	8 (15.1%)	6.30 (2.50, 15.89)	*0.0001*

Exposure is strongly linked to more severe AD, a history of atopy, and a negative impact of tobacco on QoL

Our study: Significant association between tobacco exposure and more severe form of AD, with negative impact on QoL

Active/passive exposure to tobacco increases the risk of AD

Passive smoking in children increases the risk of AD and promotes sensitization to certain allergens (+++ dust mites)
Particularly in children with a family history of atopy



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Association of atopic dermatitis with smoking: A systematic review and meta-analysis

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Le tabagisme passif chez l'enfant et les risques allergiques

Passive smoking in children and allergic risk

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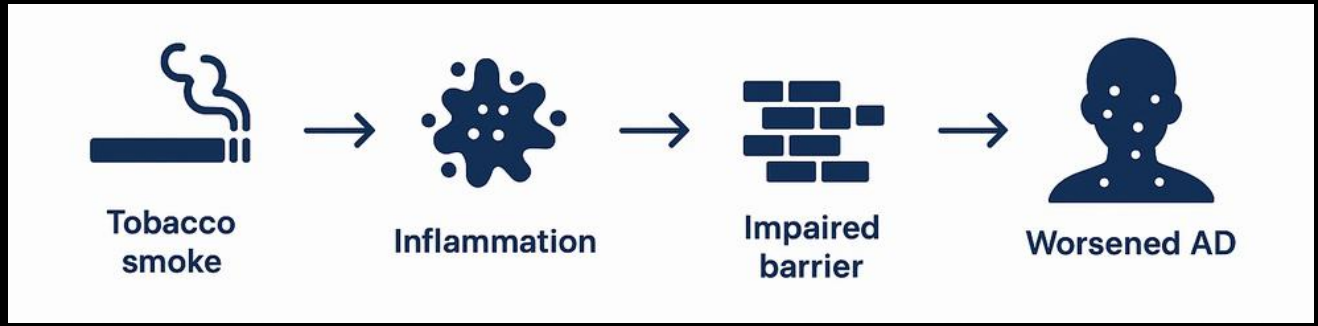
- Tobacco smoke contains pro-inflammatory compounds
  - Impairs skin barrier
  - Enhances Th2 inflammation
  - Promote mas cell activation

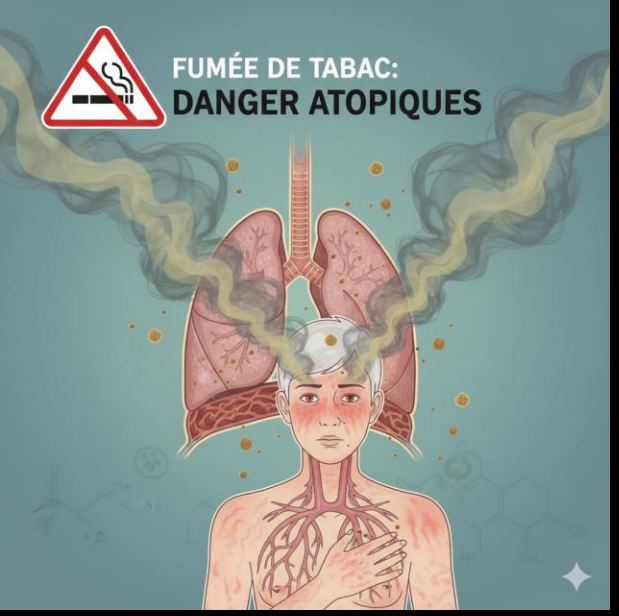


- Chronic exposure may alter skin microbiota → worsens eczema flares
- The negative impact of tobacco on QoL is confirmed by the observed increase in symptoms and clinical severity

- Our data highlights that history of atopy and moderate to severe AD severity are linked to tobacco exposure

  → Identifying these factors as key targets for prevention and clinical management

- A multifactorial approach is essential to better control the disease and improve patients' QoL
- Smoking cessation is critical to reduce AD severity and improve QoL, also positively impacting associated atopic diseases (asthma, rhinitis)
- These findings underscore the importance of targeted awareness campaigns and personalized smoking cessation support in AD patient care



Thank you for your attention