REAL LIFE DATA ON THE EVOLUTION OF DUPILUMAB-ASSOCIATED CONJUNCTIVITIS IN PATIENTS WITH ATOPIC DERMATITIS AFTER DISCONTINUATION OF DUPILUMAB AND SWITCHING TO TRALOKINUMAB OR JANUS KINASE INHIBITORS (RESO-ADOC STUDY)

P0528

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INTRODUCTION

Clinical trials and real-life data have reported an increased incidence of conjunctivitis in patients treated with dupilumab for their atopic (AD). The literature on the evolution of these conjunctivitis after dupilumab discontinuation and switching to other AD treatments and the factors associated with the complete resolution of these ocular events are lacking.

The aims of our study were (1) To describe the characteristics of patients developing conjunctivitis requiring discontinuation of dupilumab; and (2) to analyze the factors associated with a complete conjunctivitis improvement after dupilumab discontinuation and a switch to tralokinumab or Janus kinase inhibitors (JAKi).

METHODS

Multicenter retrospective cohort study that included all patients with AD treated with dupilumab who developed conjunctivitis leading to dupilumab discontinuation and switching to tralokinumab or JAKi in daily practice. Data on patients characteristics, their AD, and conjunctivitis were analyzed at the inclusion visit (corresponding to discontinuation of dupilumab and the institution of new AD treatment), at visit 2 (3–6 months after inclusion) and at visit 3 (corresponding to the last medical visit).

RESULTS

In the 12 French centers, 1109 patients were treated with dupilumab for their AD and 83 patients developed a conjunctivitis, described as severe for 30% of them, leading to dupilumab discontinuation. Data were available for 71 patients who had at least one visit after dupilumab discontinuation.

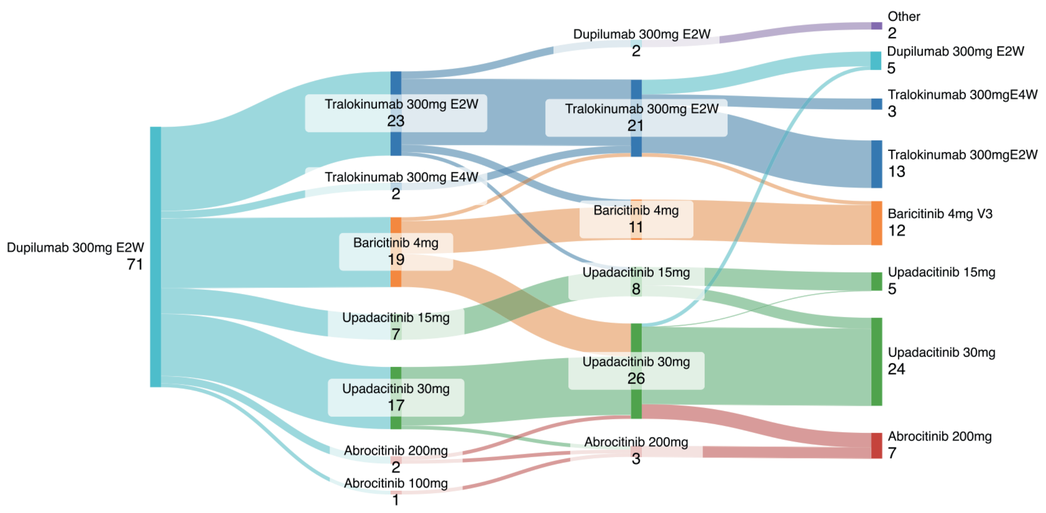
Evolution of patients' treatments over the course of this study is illustrated in Figure 1. Patients' baseline characteristics are shown in Table 1. The time (mean) between dupilumab initiation and conjunctivitis onset was 4.5 months (±3.63).

Table 1. Baseline characteristics

Age, mean (range)	35 years (17–76)
Male gender, *n* (%)	39 (55%)
AD severity at dupilumab initiation, mean (range)	
IGA	3.7 (3–4)
EASI	27.3 (10–62)
AD severity at dupilumab discontinuation based on IGA and EASI, mean (range)	
IGA	1.7 (0–4)
EASI	8.2 (2–20.9)
AD duration at dupilumab initiation (years) (SD)	30.9 ± 13.9
AD phenotype, *n* (%)	
Head and neck predominantly	31 (44%)
Hand eczema predominantly	3 (4%)
AD with no predominant location	33 (46%)
Erythrodermic AD	4 (6%)
Familial history of atopy, *n* (%)	
All type	47 (66%)
Type of familial history of atopic condition, *n* (%)	
AD	42 (89%)
Asthma	30 (40%)
Rhinitis	14 (30%)
Conjunctivitis	6 (13%)
Nasal polyposis	0 (0%)
Food allergy	2 (4%)
Other allergies	4 (9%)
Personal atopic comorbidities, *n* (%)	
All type	49 (69%)
Personal atopic comorbidities, type, *n* (%)	
Asthma	30 (61%)
Rhinitis	26 (53%)
Nasal polyposis	0 (0%)
Food allergy	8 (16%)
Other allergies	17 (35%)
Personal history of atopic conjunctivitis, *n* (%)	
All types	32 (44%)
Seasonal allergic conjunctivitis	20 (65%)
Perennial allergic conjunctivitis	5 (16%)
Atopic keratoconjunctivitis	7 (23%)
Vernal keratoconjunctivitis	0 (0%)

Abbreviations: AD, atopic dermatitis; EASI, Eczema Area and Severity Index; IGA, investigator global assessment; mOSD, medication-induced ocular surface disease; SD, standard deviation.

Figure 1. Evolution of patients' treatments over the course of the study



Only 3% of patients experienced conjunctivitis complications. None of patients who were retreated with dupilumab achieved complete conjunctivitis resolution. Only 12% of those who were switched to tralokinumab achieved a complete improvement at visit 2 and 45% at visit 3. Most of these patients needed to pursue ophtalmologic treatments. A total of 81% of who were switched to JAKi (abrocitinib, baricitinib, upadacitinib) achieved a complete resolution at visit 2 and 96% at visit 3 without needing to pursue ophtlamologic treatments for their conjunctivitis. After univariate (figure 2) and multivariate analysis (figure 3), the only factors associated with a complete resolution of dupilumab associated conjunctivitis at visit 2 and/or visite 3 were conjunctivitis duration, history of asthma and switching from dupilumab to JAKi vs switching dupilumab to tralokinumab.

Figure 2. Univariate analysis of factors associated with complete resolution of dupilumab-associated conjunctivitis.

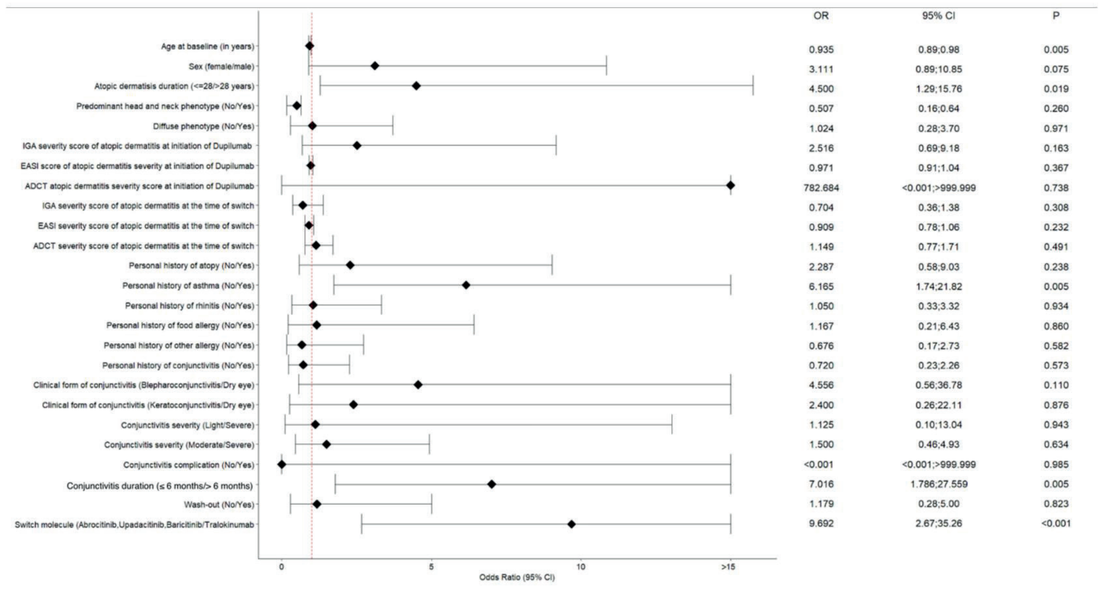


Figure 3. Multivariate analysis of factors associated with complete resolution of dupilumab-associated conjunctivitis.

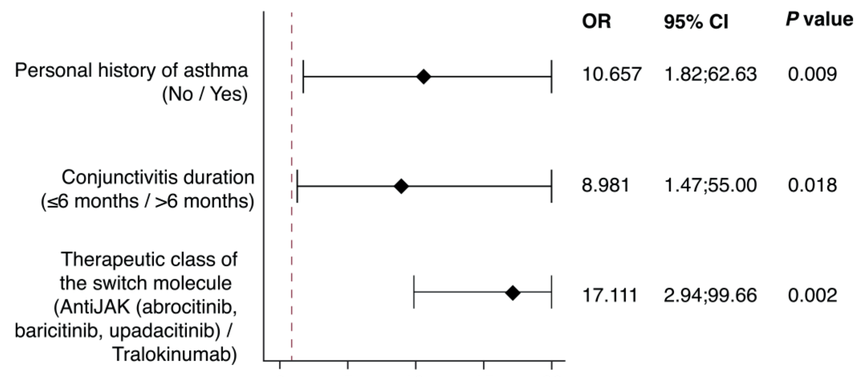
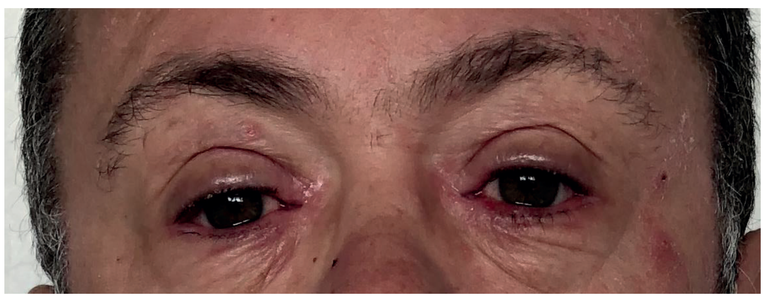
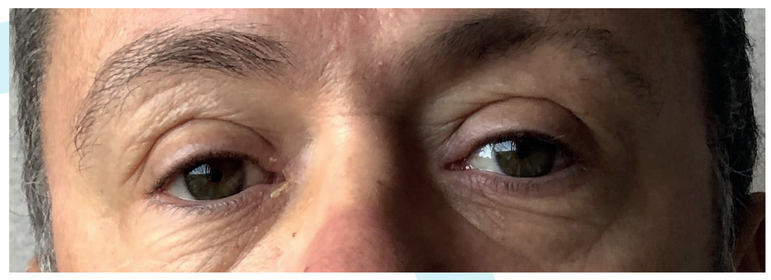


Figure 4. Evolution of dupilumab-associated conjunctivitis after switching dupilumab to a Janus kinase inhibitor





CONCLUSIONS

- **Although uncommon, severe dupilumab-associated conjunctivitis is more frequent in daily life compared to its incidence in the dupilumab pivotal trials. In these cases, our study suggests that a rapid switch to another molecule, particularly a Janus kinase inhibitor, should be considered.**

ACKNOWLEDGEMENTS

- Poster presented on behalf of the GEM Reso-Dermatologie and the OMCCI.
- This study was funded by Resomed