Is an Ophthalmology review prior to starting Dupilumab indicated in patients with Atopic Dermatitis?

Learning Objective: This retrospective cohort series aims to evaluate whether Ophthalmology screening prior to initiating Dupilumab in patients with atopic dermatitis is associated with a reduced incidence of DAOSD.

Dr Jessica Baird, Professor Dédée Murrell

University of New South Wales, Sydney, Australia

St Vincent's Hospital, Darlinghurst, Sydney, Australia

Department of Dermatology, St George Hospital, Sydney, Australia

All authors declare that there are no competing interests

Introduction

- Atopic Dermatitis (AD) affects up to 15% of the adult population in Australia
- Patients with AD have a higher likelihood of developing OSD
- Dupilumab is one of the most widely used and successful systemic agents for managing moderate-severe AD
- Dupilumab associated ocular surface disease (DAOSD) is the most frequently reported side effect with documented incidences as high as 34%

Methods

- Retrospective cohort study
- Patients with a diagnosis of severe AD who were commenced on dupilumab between January 2018 and May 2025 were included
- Patients with a diagnosis of moderate-severe AD and who were treated with dupilumab were included
- The cohort was stratified into two groups depending on whether there was prior Ophthalmology screening
- Development of DAOSD was the primary outcome

Upadacitinib

- Indicated as treatment for diagnoses including AD
- The patient cohort being treated with Upadacitinib was also reviewed and those with a diagnosis of AD were considered
- Upadacitinib is considered as a treatment when dupilumab is contraindicated or not tolerated

Variable		Entire Cohort (n=89)	DAOSD (n=16)	No-DAOSD (n=73)
Age		35.1	34.7	35.9
Gender	Male	45	9	39
	Female	40	7	34
Ophthalmology screening	Screened	74	14	60
	Not Screened	11	2	13

Table 1: Baseline demographic data for entire cohort

Results

- 89 patients included in this study
- 83% of patients in this cohort had Ophthalmology screening prior to starting dupilumab (n=74)
- Overall DAOSD incidence was 17.9% (n=16). 18.9% of patients in the screened cohort developed DAOSD (n=14) compared to 13.3% of unscreened patients (n= 2)
- Difference in the DAOSD incidence was not found to be statistically significant ($\chi^2 = 0.28$, $p = 0.598$).
- 3 patients were advised to not start dupilumab treatment based on their Ophthalmology screening assessment

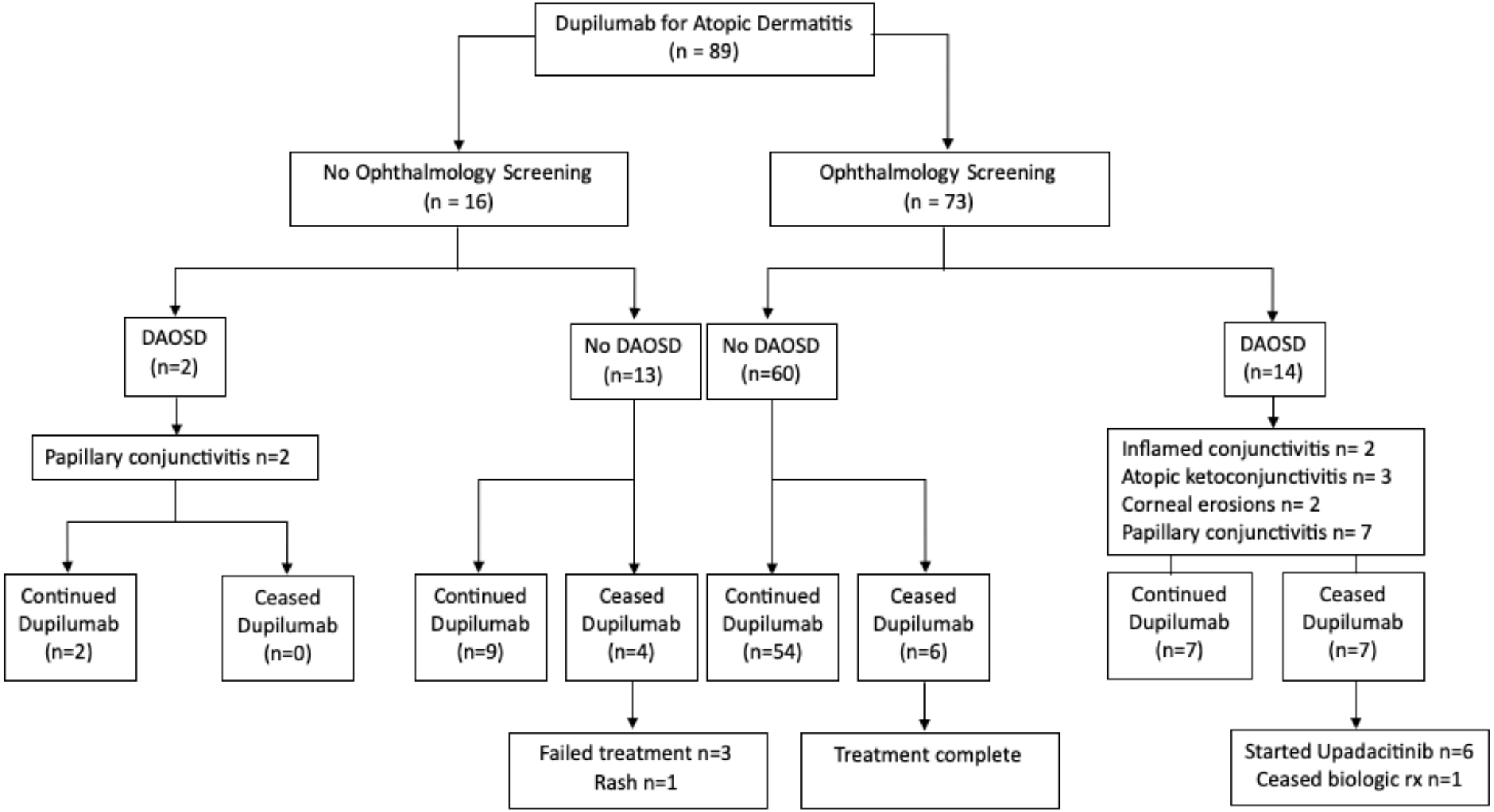

Figure 1: Incidence of DAOSD and treatment outcomes within the screened and unscreened cohort

	DOASD	No DOASD	Total	Proportion of DOASD
Screened	14	60	74	0.18918919
Unscreened	2	13	15	0.13333333
Total	16	73	89	

Table 2: Proportion of DAOSD in screened and unscreened cohorts

Discussion

Although Ophthalmology screening was not shown to reduce the incidence of DAOSD within this cohort, evidence highlights the value of early DAOSD detection and treatment

Ophthalmology screening can increase patient awareness of DAOSD and prompt early recognition of symptoms

In this cohort, 62.5% of patients with DAOSD continued dupilumab with topical therapy and follow-up, no sight-threatening events occurred, and high-risk patients were excluded at baseline screening

Limitations

- Patients excluded from Dupilumab at baseline Ophthalmology Screening
- Retrospective data collection and observational study design
- Cohort size discrepancies

Conclusions

Pre-existing OSD is a major risk factor for developing DAOSD, and early recognition and intervention has been shown to improve outcomes

Further prospective research needs to be conducted to validate this approach.

Clinicians should consider referring AD patients for Ophthalmology screening prior to initiating dupilumab therapy.

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