

Background

- Atopic dermatitis is a chronic, inflammatory skin disease
- Hypothesized to be due to barrier skin dysfunction and immune dysregulation
- The goal of this study is to examine the relationship between factors such as atopic conditions, environmental allergies, and response to treatment and atopic dermatitis
- We aim to investigate the utility of detectable surrogate markers for clinical response and disease course

Methods

- Retrospective chart review of pediatric and adult allergy & immunology and dermatology clinic patients at large tertiary care centers between 2020 and 2024
- Included patients with a diagnosis of atopic dermatitis
- Excluded any patients that were not current patients of the LSU Allergy & Immunology or LSU Dermatology clinics
- Collected data including:
 1. Allergen sensitization
 2. Presence of other atopic conditions
 3. Use of topical treatments and/or immunosuppressive therapies
 4. Eosinophil level and percentage
 5. IgE level, and response to treatment

Results

- Of the 120 subjects analyzed, the average age was 16 years old with 93% of subjects diagnosed in childhood or infancy
- Only about 1/3 of subjects had documented allergy testing
- 61% had another documented atopic condition
- 58% had a recent eosinophil count (mean = 557 x 10³ u/L)
- 30% had an IgE level (mean = 2,338 kU/L)
- Many subjects did not have follow up regarding treatments
- Severity of atopic dermatitis was not consistently documented

	Percentage of participants tested	Percentage of participants with positive findings
Environmental Allergy Testing	36%	100%
Dust Mites IgE	36%	63%
Grass IgE	32%	50%

	Number of Participants with Positive Response	Number of Participants with Negative Response
Documented Atopic Condition	79	41
Eosinophil Count	70	50
IgE Level	36	84

Conclusions

- No relationship could be found between these listed factors and control of atopic dermatitis
- This finding fits with previous studies, although limited by lack of regular laboratory testing
- Potential biomarkers including specific IgE and specific allergen testing were not found in most subjects
- This could be noted as an area of improvement along with overall better characterization of our patient population

Future Directions

- Consider better characterization of atopic dermatitis across specialties
- Collaboration between specialties to increase rates of environmental allergy testing

References

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