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Allergic Contact Dermatitis to Chlorhexidine: Retrospective Analysis of North American Contact Dermatitis Group Data, 2015 to 2016

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Background

- Chlorhexidine is a topical antiseptic used in medical preparations as well as some personal care products
- Large scale studies of chlorhexidine reactions lacking
- This retrospective review aimed to further characterize contact allergy to chlorhexidine, as well as to identify common antigen sources and both clinical and occupational relevance

Methods

- 2-year retrospective multicenter cross-sectional analysis of NACDG data of patients patch tested to chlorhexidine (n = 5594)
- Analysis focused on individuals with a positive (allergic) patch-test reaction to chlorhexidine digluconate (1% aqueous)
 - Chlorhexidine allergy included:**
 - + (weak, nonvesicular erythema with papules or infiltration)
 - ++ (strong, edematous, or vesicular)
 - +++ (extreme, spreading, bullous, or ulcerative)
 - +/-? (macular erythema) reactions coded as allergic
 - Excluded irritant and +/-? reactions not interpreted as allergic
- “Definite”, “probable”, and “possible” clinical relevance = “currently” relevant; past/unknown clinical relevance also included
- “Allergic” patients = ≥ 1 positive patch-test reaction to any NACDG standard series allergen

Prevalence of Chlorhexidine Allergy

- 0.8% of patients** had an allergic patch test reaction to chlorhexidine
 - 45.7% of allergic reactions were coded as currently relevant to their dermatitis

In chlorhexidine-allergic patients...

Top 3 most common body sites:

- Scattered/generalized (37.0%)
- Hand (30.4%)
- Face (21.7%)

Most frequently associated sources:

- Skin disinfectants (n=11; 23.9%)
- Personal care products (n=3; 6.5%)
- Shampoos (n=3; 6.5%)



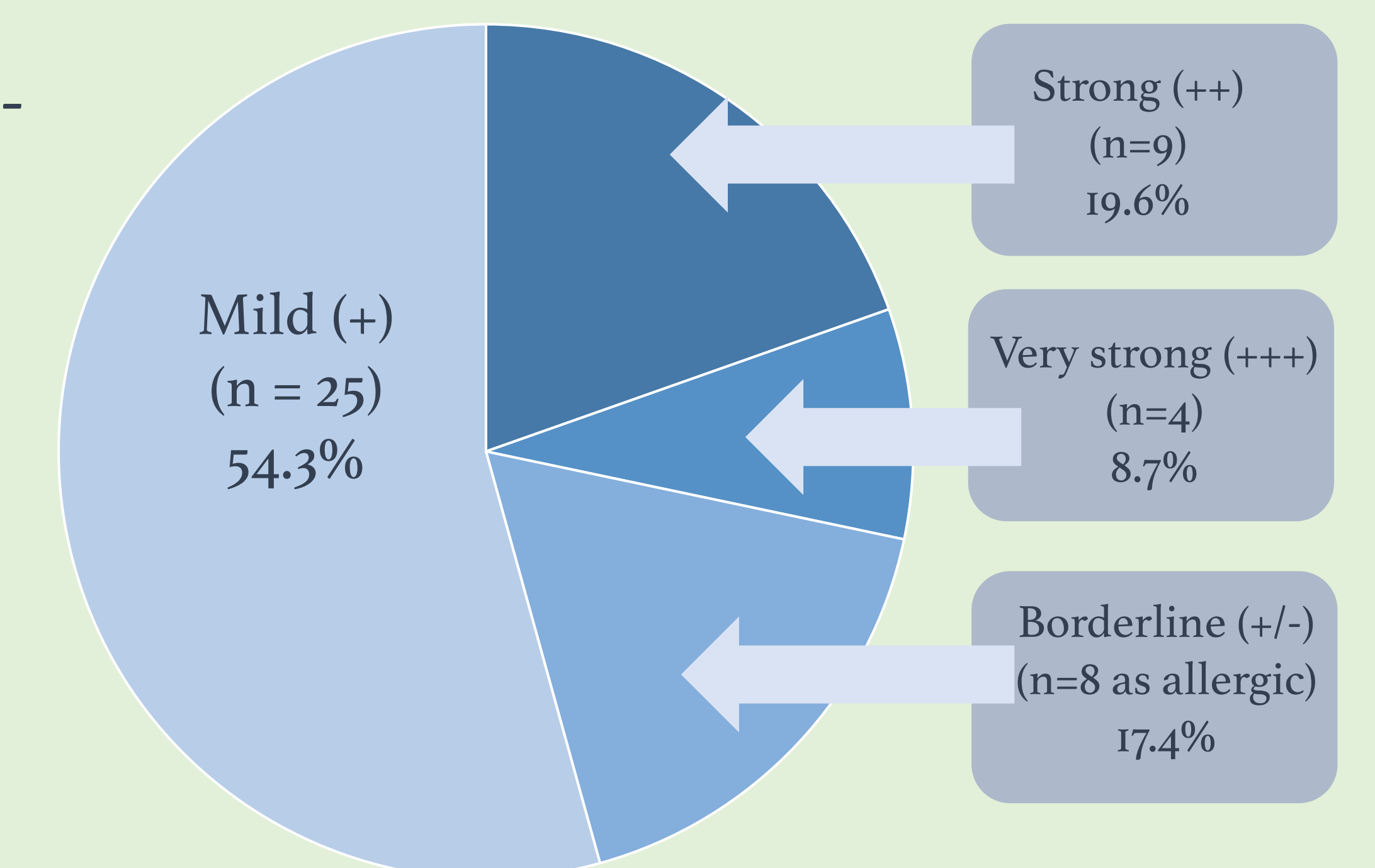
Facial Chlorhexidine ACD – Le Corre, et al. 2010

15.2% of reactions were occupationally related:

- Nursing
- Dental assistants
- Funeral directors
- Mechanics
- Machinists

Strength of Reaction

Strength of
Chlorhexidine-
Allergic
Reactions
(n = 46)



Conclusion

- Frequency of allergic chlorhexidine reactions was <1.0%
- Most common clinical presentations were scattered/generalized, hand, or facial dermatitis
- Nearly half of all chlorhexidine-allergic patients had current clinical relevance
- While most clinicians are aware of chlorhexidine in disinfectant hand soaps and surgical scrubs, hair care products may be under recognized

References

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