

# XLA and Recurrent Conjunctivitis; A Unique Association?

## Background

- Previous study estimates that 21% of patients with XLA (X Linked Agammaglobulinemia) have had at least one episode of conjunctivitis.<sup>1</sup>
- A further review showed that immunoglobulin replacement therapy led to a reduction in all complications of XLA except conjunctivitis and sinusitis.<sup>2</sup>
- In our experience, though described, conjunctivitis is less common in patients with CVID (Common Variable Immunodeficiency).

## Aims

- To determine whether there was an association between XLA and conjunctivitis and if this association was unique amongst primary antibody deficiencies.



## Method

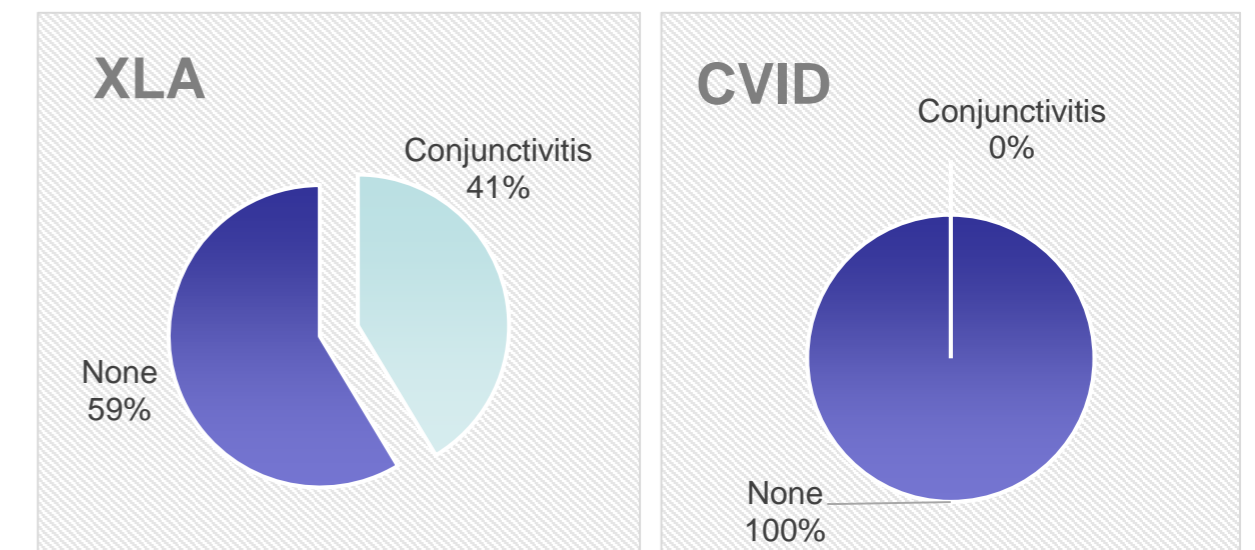
Retrospective observational study was carried out at two sites; The Regional Immunology Services of Northern Ireland and St. James's Hospital, Dublin, Republic of Ireland.

- Local immunodeficiency registry databases were used to identify patients with XLA and CVID
- Age-matched CVID patients with absent IgA levels were selected – to control for the possibility that IgA antibodies play a role in protection against conjunctivitis.
- All XLA and CVID patients were on immunoglobulin replacement therapy and IgG trough levels were compared.
- Patient electronic care records were used to assess burden of eye disease - documented episodes of conjunctivitis or other eye infection or ophthalmology review.

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## Results

- 29 patients with XLA and 30 patients with CVID with absent IgA were analysed.
- Mean age of the XLA group was 31 years (range 15-51 years) and the CVID group was 33 years (range 16-44 years).
- CVID group had 15 males (50%) and 15 females (50%).
- 12 out of the 29 patients with XLA (41%) had suffered from recurrent conjunctivitis ( $\geq 2$  episodes).
- No patients in the CVID group had documented episodes of recurrent conjunctivitis or had attended an ophthalmologist
- Mean IgG trough levels were 10.7g/L (range 4.3-18.8) for the XLA group and 10.41g/L (range 3.1-15.6) for the CVID group.



## Conclusion / Discussion

- Our study found 12 out of 29 (41%) of patients with XLA had recurrent conjunctivitis compared to zero patients in the CVID with absent IgA group.
- The increased susceptibility to conjunctivitis in patients with XLA was found not to be due to IgA deficiency or lower IgG trough levels or age.
- We demonstrate here the common and perhaps unique susceptibility to conjunctivitis in patients with XLA. Further research is needed to fully characterise this relationship and establish the underlying pathology.

## References

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2. Abohashani H, Hirbod-Mobarakeh A, Shahinpour S, Panahi M, Mohammadnejad P, Mirmirani B, Shakari MS, Samavat B, Aghamohammadi A. Mortality and morbidity in patients with X-linked agammaglobulinemia. *Allergol Immunopathol (Madr)*. 2015 Jan-Feb;43(1):62-6