A case of successful management of adult-onset linear IgA bullous disease with sulfasalazine during the COVID-19 pandemic

Dr Sana Ashraf, Dr Shahd Elamin, Dr Julia Tolland
Dermatology Department, Ulster Hospital Dundonald

South Eastern Health and Social Care Trust

Introduction

- Linear IgA bullous disease (LABD) is a rare, acquired, autoimmune skin condition that is associated with urticarial plaques and subepidermal blistering
- It mainly affects young children and older adults(1)
- Direct immunofluorescence (IMF) is essential for diagnosis and shows linear deposition of immunoglobulin A (IgA) along the dermal-epidermal junction(2).
- LABD can be idiopathic, drug-induced, or associated with systemic autoimmune diseases such as ulcerative colitis(3), as in the case we present here
- Dapsone, corticosteroids, and sulphapyridine are commonly used options in the management of LABD(4)
- There are limited options if these were to fail, or be inappropriate options
- We present a case of successful management of LABD with sulfasalazine, where use of dapsone was deemed unsafe. There is minimal literature regarding the use of sulfasalazine as a treatment option, and therefore we find this to be an interesting case suggesting an alternative therapeutic option.

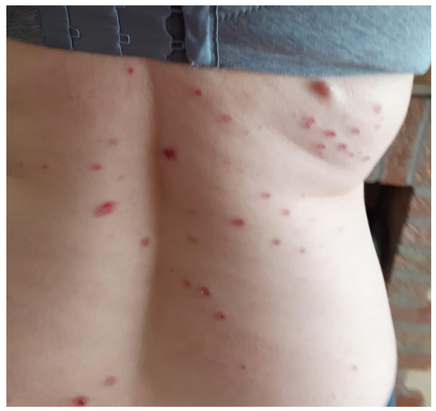

Figure 1: Widespread, excoriated vesicular and bullous lesions

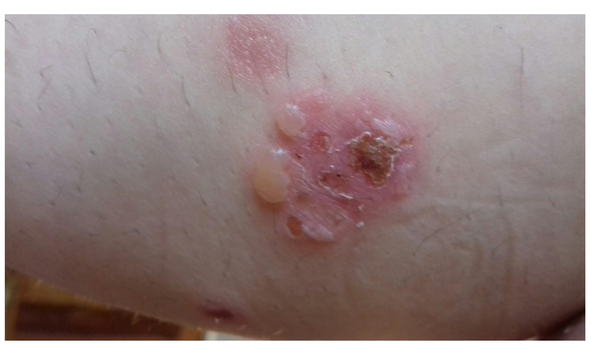

Figure 2 Grouped vesicles and bullae on crusted, urticarial plaque

Case

46 year old Caucasian female presents with 1 month history of a severely pruritic and blistering rash, affecting trunk, head and limbs. History of Ulcerative Colitis (UC) and Primary Sclerosing Cholangitis (PSC)

→ Clinical examination: Widespread vesicles and bullae arising from urticated patches, distributed in an annular fashion (figures 1+2). No mucosal involvement

↓ Biopsy: Direct IMF established IgA deposition along the dermal-epidermal junction, confirming a diagnosis of LABD (Figure 3)

← Commenced on high dose steroids but failed weaning

↓ Dapsone considered and discussed with patient's GI team. Deemed unsafe due to history of PSC and therefore risk of hepatitis

→ Mycophenolate mofetil commenced instead. Ongoing issues in trying to wean steroids despite dual therapy. New lesions appeared.

↓ Literature search conducted. Sulfasalazine used successfully in recalcitrant dermatitis herpetiformis prompted the idea to try sulfasalazine

← Mesalazine was being used to treat this patient's UC. It was switched to sulfasalazine after discussion with GI team.

↓ Mycophenolate mofetil and steroids both successfully weaned

→ Within a few weeks, there was significant improvement in the patient's dermatological symptoms- itch resolution and no further blister formation. UC also remained stable. Patient continues to do well.

Discussion

- Dapsone is a 1st line management option in LABD, but could not be used here due to an unacceptable risk of hepatitis
- Sulfasalazine is a disease-modifying anti-rheumatic drug (DMARD) and is the combination of a sulphonamide (sulfapyridine) and mesalazine (mesalamine, 5-aminosalicylic acid).
- Widely used in rheumatoid arthritis and inflammatory bowel disease, but little literature on its use in dermatological conditions
- Has antimicrobial and anti-inflammatory properties (similar to dapsone) but also immunomodulatory and anti-proliferative properties(5)
- During the COVID-19 pandemic, the advice has largely been to consider withholding immunosuppressive medication in the context of a patient exhibiting COVID-19 symptoms:
- However, The National Institute for Clinical Excellence (NICE) guidance mentions sulfasalazine specifically as one of the *few* drugs that can be continued in such a scenario(6).
- Sulfasalazine was therefore a surprising and successful alternative to other more immunosuppressive agents that may have otherwise been considered in her management

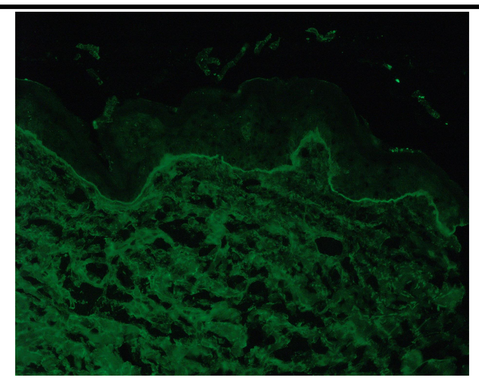

Figure 3: Direct immunofluorescence showing linear deposition of IgA along the dermal-epidermal junction

Conclusions

Two clinical entities were treated with a single, older agent, that presents less immunosuppressive risk in the context of the COVID-19 pandemic, and presents as a possible option for patients who are unable to take the more classically used treatment options. It is also an option for those who have a dual diagnosis as in this case, allowing for one agent to manage both conditions.

References

1. Venning VA. Linear IgA disease: clinical presentation, diagnosis, and pathogenesis. *Dermatol Clin*. 2011;29(3):453-ix. doi:10.1016/j.det.2011.03.013
2. Wojnarowska F, Marsden RA, Bhogal B, Black MM. Chronic bullous disease of childhood, childhood cicatricial pemphigoid, and linear IgA disease of adults. A comparative study demonstrating clinical and immunopathologic overlap. *J Am Acad Dermatol*. 1988;19(5 Pt 1):792-805. doi:10.1016/s0190-9622(88)70236-43.
3. Paige DG, Leonard JN, Wojnarowska F, Fry L. Linear IgA disease and ulcerative colitis. *Br J Dermatol*. 1997;136(5):779-782. Available from https://pubmed.ncbi.nlm.nih.gov/9205518/ [Accessed 28th June 2021]
4. Genovese G, Venegoni L, Fanoni D, Muratori S, Berti E, Marzano AV. Linear IgA bullous dermatosis in adults and children: a clinical and immunopathological study of 38 patients. *Orphanet J Rare Dis*. 2019;14(1):115. doi:10.1186/s13023-019-1089-2
5. Mushtaq S, Sarkar R. Sulfasalazine in dermatology: A lesser explored drug with broad therapeutic potential. *Int J Womens Dermatol*. 2020;6(3):191-198. doi:10.1016/j.ijwd.2020.01.009
6. National Institute for Health and Care Excellence (NICE), *COVID-19 rapid guideline: dermatological conditions treated with drugs affecting the immune response [NG169]*. 2020. Available from: https://www.nice.org.uk/guidance/ng169/chapter/3-Patients-not-known-to-have-COVID-19 [Accessed 2nd July 2021]