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INVITED REVIEW

Glucocorticoids in IgA vasculitis

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ABSTRACT

IgA vasculitis (IgAV) is an immune complex vasculitis affecting small vessels characterized by IgA1 immune deposits. IgA vasculitis typically resolves spontaneously in most cases, especially in pediatric cases but may have more severe outcomes in adults and the optimal treatment for IgAV remains controversial. Although glucocorticoids are the mainstay of treatment, studies are investigating the role of alternative immunosuppressive agents and biologics, particularly in adult onset, severe or resistant cases. The efficacy of glucocorticoids appears to vary according to the specific manifestations and severity of IgAV. They may be effective in treating complications when combined with immunosuppressive agents but glucocorticoids should not be used prophylactically as they do not prevent complications.

Keywords: disease management, glucocorticoids, IgA vasculitis.

Introduction

IgA vasculitis (IgAV), formerly known as Henoch-Schönlein purpura, is an immune complex vasculitis affecting small vessels characterized by IgA1 immune deposits. IgAV can affect both children and adults, and its clinical course, prognosis and treatment approaches differ. IgAV affects multiple organs, including the skin, joints, gastrointestinal tract, and kidneys [1]. IgAV is the most common pediatric vasculitis, with nephritis (IgAVN) being its most significant chronic manifestation [2]. IgA vasculitis typically resolves spontaneously in most cases, especially in pediatric cases but may have more severe outcomes in adults [3-5]. Adult-onset IgAV is associated with more severe skin and renal involvement, including ulcerative lesions and nephrotic-range proteinuria [6].

Several factors are associated with organ dysfunction or damage in this condition. Renal involvement is a major concern, with risk factors including older age at onset, lower glomerular filtration rate, nephrotic or nephritic-nephrotic syndrome, and crescentic nephritis on biopsy [7]. Gastrointestinal involvement and elevated diastolic blood pressure are also predictive of renal involvement [8]. Long-term end-stage renal disease is associated with baseline renal dysfunction, proteinuria, and specific histological findings [5].A subset of IgAV patients experience renal complications that may persist and relapse [1]. Infections, particularly bacterial and viral, are common triggers of IgA vasculitis [9]. Relapses in IgA vasculitis (IgAV) are common and are associated with several factors. In IgAV, younger age and lack of initial glucocorticoid treatment are associated with higher relapse rates [10]. Other factors include older age at onset, persistent rash, abdominal pain, haematuria, underlying disease, severe leukocytoclasis and absence of IgM deposition on vessel walls [11]. Understanding these risk factors may help to guide monitoring and treatment strategies for IgAV patients.

Glucocorticoids in management

Glucocorticoids are commonly used to treat IgA vasculitis but their effectiveness remains controversial. Some immunosuppressive agents, such as azathioprine, cyclophosphamide, cyclosporine, mycophenolate, rituximab, and dapsone have been used in combination with glucocorticoids, but their effectiveness has not been definitively established [12,13].

Treatment approaches for pediatric IgAV vary widely, with glucocorticoids being the primary intervention. A large cohort study found that conservative management, including observation and RAAS blockade, was the most common approach for IgAVN, with immunosuppression reserved for more severe cases. Overall, renal outcomes were generally favorable, with low rates of chronic kidney disease and renal failure [14]. For mild cases, oral glucocorticoids are recommended, while moderate to severe cases may require parenteral or pulsed doses [2]. However, there is considerable variability in glucocorticoid dosing, and higher doses do not necessarily lead to improved outcomes [15]. Cyclophosphamide is sometimes used for severe cases, but its efficacy in preventing progression of nephritis is questionable [16].

Treatment approaches for adult IgAV vary depending on disease severity. For moderate to severe cases, systemic steroids are recommended [3]. High-dose methylprednisolone followed by oral steroids has shown success in managing severe abdominal symptoms. In cases of organ-threatening IgAV, combination therapies including systemic corticosteroids, oral immunosuppressants, rituximab, and cyclophosphamide have been used [4]. For glomerulonephritis and other complications, high-dose steroids, cyclosporine, and mycophenolate have demonstrated efficacy in randomized trials [1]. Long-term prognosis depends on the extent of renal involvement, necessitating follow-up to assess for relapse or remission. Rituximab has shown promise in treating adult IgA vasculitis with nephritis, achieving complete remission in some cases. Rituximab, an anti-CD20 monoclonal antibody, has shown promise in treating steroid-dependent IgAV cases, particularly those with gastrointestinal involvement [17]. However, the optimal treatment for adult IgAV remains controversial, and more research is needed to establish standard protocols for various treatment options in managing IgAV and preventing relapses. In cases of severe abdominal pain resistant to corticosteroids, intravenous γ globulin has shown promise as a safe alternative [18].

The long-term use of glucocorticoids in IgAV remains controversial. Studies have shown that steroids do not prevent complications and should not be used prophylactically. However, high-dose steroids may be beneficial in treating glomerulonephritis and other severe complications [1]. For chronic cutaneous IgAV, corticosteroids are often ineffective [19]. Relapse of IgAV occurs in about 15% of patients, more frequently in younger patients and those without baseline glucocorticoid treatment [10].Intravenous steroid pulses have shown a lower relapse risk compared to oral steroids in IgA nephropathy treatment. In patients receiving steroid therapy, relapse, non-remission, time-averaged eGFR, and time-averaged serum albumin are independent predictors of long-term prognosis [20].

In summary, the optimal treatment for IgAV remains controversial. Although glucocorticoids are the mainstay of treatment, studies are investigating the role of alternative immunosuppressive agents and biologics, particularly in adult onset, severe or resistant cases. The efficacy of glucocorticoids appears to vary according to the specific manifestations and severity of IgAV. They may be effective in treating complications when combined with immunosuppressive agents, but systematic reviews suggest that steroids should not be used prophylactically as they do not prevent complications. Further research is therefore needed to determine optimal treatment strategies for IgA vasculitis.

Author contribution

Study conception and design: BA; draft manuscript preparation: BA. All authors reviewed the results and approved the final version of the manuscript.

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Conflict of interest

The authors declare that there is no conflict of interest.

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