change than SLEDAI. This new index is very promising in the evaluation of a treatment response and in discriminating LDA from remission.

Learning objectives

- Describe definitions of remission in SLE
- Identify patients who can achieve SLE remission
- Identify patients who can achieve SLE LDA

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Plenary II: Novel Therapeutic Approaches to Improve Clinical Outcomes

01 TARGETING TYPE I INTERFERONS

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Evidence that the type I interferon pathway plays an important role in the pathogenesis of SLE has been mounting over the last several decades.^{1–3} Therefore, it was only natural that this pathway be the target of therapeutic interventions in systemic lupus erythematosus (SLE). Although rontalizumab and sifalimumab, the first two monoclonal antibodies directed against interferon alpha to be evaluated in clinical trials, yielded negative and modest clinical trial results, respectively, other pursuits were undertaken that initially proved more successful. Phase II SLE clinical trial data were quite robust with anifrolumab, an antibody to the type I interferon receptor that inhibits all five subtypes of type I interferons.⁴ These results reaffirmed the clinical significance of type I interferons.

This presentation will review various strategies being pursued in order to block the interferon pathway.⁵

Learning objectives

- Describe the role of the type I interferon pathway in the pathogenesis of SLE
- Discuss strategies for inhibiting the type I interferon pathway
- Analyse results of clinical trials in SLE of interferon inhibitors

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02 TARGETING B CELLS AND PLASMA CELLS

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It is almost 20 years since B-cell depletion using rituximab [anti CD20] was introduced for the treatment of systemic lupus erythematosus (SLE).¹ Despite the failure of two major clinical trials² both the ACR and EULAR guidelines recommend rituximab for the treatment of lupus nephritis and NHS England permits its use more widely.

Well over 50,000 SLE patients worldwide have been treated with rituximab and it seems to be very effective for many haematological, musculoskeletal, dermatological and renal aspects of lupus.³ Increased risk of infection and hypogammaglobinaemia remain concerns.⁴ Newer fully-humanized anti-CD20 monoclonal antibodies (e.g. ofatumumab) offer a way forward for those who become allergic to rituximab, which is 20% murine. Research indicates that there are at least two types of anti-CD20 antibodies.

In contrast, anti-plasma cell therapies have been much less widely utilized. Some studies using bortezomib (anti-proteasome) have been reported⁵ and studies with experimental anti CD19 monoclonals are under way. Although significant reductions in autoantibodies (and immunoglobulins) and a rise in serum complement have been noted, precursor B-cells and T-cells largely remain unaffected resulting in a rapid re-population of short-lived plasma cells. This result suggests that this approach will need to be combined with other B-cell therapies.

Learning objectives

- Describe the role anti-CD20 antibodies in the treatment of SLE
- Explain the benefits of rituximab and ofatumumab for patients with SLE
- Discuss utilization of proteasome inhibitors, such as bortezomib, for the treatment of SLE

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