

Advancing eczema management

An in-depth discussion on biologics with Professor Carsten Flohr



Eczema, particularly atopic dermatitis, affects millions of individuals worldwide, with a significant portion experiencing moderate to severe symptoms that profoundly impact their quality of life. Managing eczema involves a range of treatments, from emollients to potent systemic therapies. However, for patients with severe forms of eczema who do not respond adequately to traditional treatments, biologic therapies have emerged as a groundbreaking alternative.

In this conversation with Amena Warner, Head of Clinical Services for Allergy UK, Professor Carsten Flohr, a leading consultant dermatologist and expert in atopic eczema, offers his insights into the evolving role of biologics in treating severe eczema. He discusses the criteria for patient suitability, the patient pathway, and key considerations for healthcare professionals managing these treatments. This conversation is particularly relevant for GPs and nurses, who play a crucial role in the multidisciplinary care of eczema patients.

Could you elaborate on how we define moderate to severe eczema, and why this classification is important in the treatment process?

Defining the severity of eczema is indeed a fundamental step in determining the appropriate treatment approach. Moderate to severe eczema is typically characterized by extensive skin involvement, intense itching, and significant disruption to daily life, including sleep disturbances and emotional distress. These factors are not only crucial for understanding the disease's impact on the patient but also for guiding treatment decisions.

We often use a combination of clinical assessments and patient-reported outcome measures to classify the severity of eczema. The Eczema Area and Severity Index (EASI) and the Patient Oriented Eczema Measure (POEM) are two commonly used tools. The EASI score is an objective assessment conducted by the clinician, evaluating the extent and severity of eczema on different parts of the body. POEM, on the other hand, captures the patient's perspective, focusing on symptoms like itching, sleep disturbance, and the impact on daily activities.

However, while these tools are invaluable, they don't always capture the full picture. For instance, a patient might have extensive lesions that are visually significant but not particularly symptomatic, while another might have less visible eczema that is profoundly distressing due to severe itching or sleep loss. This is why it's essential to adopt a holistic approach, considering not just the physical symptoms but also the psychological and social impacts of the disease. In clinical practice, this means engaging in thorough discussions with patients about how their eczema affects their quality of life and tailoring the treatment approach accordingly.

That's a comprehensive overview. Moving on to treatment options, could you outline the conventional treatment pathways for managing moderate to severe eczema and discuss how these compare in terms of efficacy and safety?

Absolutely. The management of moderate to severe eczema typically begins with topical therapies, such as emollients and corticosteroids. However, when these are insufficient, we turn to systemic treatments. The most commonly used systemic therapies include immunosuppressants like cyclosporine, methotrexate, azathioprine, and mycophenolate mofetil. These drugs work by broadly suppressing the immune system to reduce inflammation, which is a key driver of eczema.

Cyclosporine, for instance, is a potent immunosuppressant that can be very effective in controlling severe eczema. However, it's usually only recommended for short-term use due to its potential side effects, such as nephrotoxicity and hypertension. Methotrexate is another commonly used drug that can be taken orally or via injection. It's generally well-tolerated, but side effects like nausea, liver toxicity, and bone marrow suppression need to be monitored carefully.

Azathioprine and mycophenolate mofetil are less commonly used but can be effective in certain patients, particularly those who may not tolerate cyclosporine or methotrexate. These drugs also require regular monitoring, particularly of blood counts and liver function, to avoid serious complications.

While these treatments can be highly effective, they are not without risks. The broad immunosuppression they induce increases the patient's susceptibility to infections, and long-term use can lead to cumulative toxicity, particularly affecting organs like the liver and kidneys. This is where biologics offer a significant advantage—they provide a more targeted approach to treatment, with a reduced risk of systemic side effects.

Biologics certainly seem to offer a more targeted treatment option. Could you delve into how biologics work specifically for eczema, and what makes them different from traditional immunosuppressive therapies?

Biologics are indeed a significant advancement in the treatment of severe eczema, offering a more precise way to manage the disease. Unlike traditional immunosuppressants, which broadly dampen the immune system, biologics are designed to target specific molecules involved in the inflammatory process that drives eczema.

For eczema, the primary targets are cytokines—proteins that play a crucial role in regulating the immune response. Specifically, biologics used in eczema often target the Th2 inflammatory pathway, which is heavily implicated in the disease's pathology. Key cytokines in this pathway include interleukin-4 (IL-4), interleukin-13 (IL-13), and interleukin-31 (IL-31). These cytokines contribute to the chronic inflammation seen in eczema, leading to symptoms like itching, redness, and impaired skin barrier function.

Dupilumab, for instance, is a biologic that targets IL-4 and IL-13, effectively reducing inflammation and improving skin barrier function. It was the first biologic approved for eczema and has been a game-changer for many patients who had previously struggled with conventional therapies. Another

biologic, tralokinumab, specifically targets IL-13 and has shown promise in clinical trials as well.

What sets biologics apart from traditional immunosuppressants is their specificity. By targeting only the molecules involved in the inflammatory process, biologics can reduce symptoms with fewer systemic side effects. This is particularly beneficial for patients who are at higher risk of complications from broad immunosuppression, such as those with a history of recurrent infections or other comorbidities.



Given the increasing number of biologics available, how do clinicians decide which one to use for a specific patient? Are there particular factors that influence this decision?

Deciding which biologic to use can indeed be challenging, given the growing number of options and the complexity of eczema as a disease. Unfortunately, we currently lack specific biomarkers that could guide us in predicting which biologic will be most effective for a particular patient. This means that treatment selection often involves a degree of trial and error.

When choosing a biologic, we consider several factors, including the patient's medical history, the severity of their symptoms, and their response to previous treatments. For example, if a patient has a history of asthma or other atopic conditions, dupilumab, which targets IL-4 and IL-13, might be a good choice given its efficacy in both eczema and other atopic diseases.

Additionally, patient preference plays a crucial role. Some patients may prefer a treatment that requires less frequent dosing or one that has a lower risk of certain side effects. For example, while dupilumab is typically administered every two weeks, some newer biologics may offer more extended dosing intervals, which could be more convenient for patients.

It's also important to monitor the patient's response to treatment closely. If a patient does not respond adequately to the first biologic, we may consider switching to another. Fortunately, many patients respond well to biologics, and even if the first choice doesn't provide the desired results, another biologic or a different treatment approach, such as JAK inhibitors, can often be effective.

Let's focus on the patient pathway now. Once a patient starts on biologic therapy, what does the follow-up and monitoring process look like, and what role do GPs and nurses play in this?

The follow-up and monitoring process is a critical component of managing patients on biologic therapy. Although biologics are generally well-tolerated, it's essential to ensure that the treatment is effective and to monitor for any potential side effects.

In the early stages of treatment, patients are typically seen every four to eight weeks. During these visits, we assess the patient's response to the biologic, monitor for side effects, and adjust the treatment plan as necessary. It's important to remember that while biologics are highly effective, they are not without risks, so ongoing monitoring is crucial.

Common side effects of biologics include injection site reactions, which are usually mild and self-limiting, and conjunctivitis, particularly with dupilumab. Patients should be educated about these potential side effects and advised on how to manage them. For instance, using lubricating eye drops can help alleviate symptoms of conjunctivitis.

GPs and nurses play a vital role in the ongoing care of patients on biologics, especially as the treatment becomes more stable. They can help monitor for any emerging side effects, provide education and support to patients, and coordinate care with dermatologists and other specialists. It's also important for primary care providers to know when to refer patients back to a specialist, particularly if they notice any unusual symptoms or if the patient's eczema is not responding as expected.

For example, if a patient reports worsening eczema or new symptoms that could indicate an infection or other complications, this would warrant a prompt referral to the specialist team. GPs and nurses are often the first point of contact for patients, so their role in early detection and management of side effects is critical.



Are there any specific red flags that healthcare professionals should watch for in patients on biologics, and how can they best manage these patients in a primary care setting?

With biologics, there are relatively few severe red flags, which is one of the benefits of these treatments. However, healthcare professionals should still be vigilant for certain signs and symptoms. For example, while biologics generally have a lower risk of systemic side effects compared to traditional immunosuppressants, they can still increase the risk of infections, particularly respiratory infections.

If a patient develops symptoms such as fever, cough, or unexplained fatigue, it's important to investigate these promptly. These could be signs of an underlying infection that may require treatment, or in rare cases, they could indicate a more serious complication related to the biologic therapy.

Another area to watch is the patient's overall response to the treatment. If there is a lack of improvement or if the eczema worsens, this could indicate that the biologic is not working as expected. In such cases, the patient should be reassessed, and alternative treatment options should be considered. This might involve switching to a different biologic or exploring other treatments, such as JAK inhibitors.

For patients on JAK inhibitors, more extensive monitoring is required, particularly in terms of blood counts and screening for infections like tuberculosis before starting treatment. This adds an additional layer of complexity to patient management, which may require more frequent collaboration between primary and secondary care.

In a primary care setting, GPs and nurses can manage many aspects of patient care, including monitoring for side effects, providing patient education, and ensuring adherence to the treatment plan. However, they should also be aware of the limits of their role and know when to refer patients back to a specialist. This collaborative approach is essential for providing comprehensive care to patients on biologic therapy.

As we look to the future, how do you see the role of biologics evolving in the treatment of eczema, and what emerging treatments should we be aware of?

The future of eczema treatment is incredibly promising, with biologics playing an increasingly central role. As we continue to develop and refine these therapies, there's potential for even more personalised treatment approaches. For instance, ongoing research into biomarkers might one day allow us to predict which biologic will be most effective for a particular patient, reducing the trial-and-error aspect of treatment.

In addition to biologics, JAK inhibitors are an exciting area of development. These small molecule drugs work by inhibiting specific enzymes involved in the inflammatory process and offer another targeted treatment option. They are particularly useful for patients who might not respond adequately to biologics or who have contraindications to these therapies.

As more treatments become available, the challenge for healthcare providers will be to stay informed about the latest developments and to integrate these new options into clinical practice effectively. Collaboration between specialists, GPs, and nurses will be key to ensuring that patients receive the best possible care, tailored to their individual needs.

Emerging treatments like JAK inhibitors and new biologics offer hope for patients with difficult-to-treat eczema. These therapies, combined with a better understanding of the underlying mechanisms of eczema, could lead to even more effective and personalised treatment strategies in the future.

Overall, the landscape of eczema treatment is evolving rapidly, and it's an exciting time for both patients and healthcare providers. With ongoing research and innovation, we are moving closer to achieving better control and improved quality of life for patients with severe eczema.

In conclusion, biologics represent a significant advancement in the management of severe eczema, offering targeted treatment with fewer side effects compared to traditional immunosuppressants. As healthcare professionals, understanding when and how to use these therapies, along with careful patient monitoring, **is essential for optimising outcomes. With ongoing research and developments in this field, the future of eczema treatment looks brighter than ever, providing hope and improved quality of life for patients who have long struggled with this challenging condition.**



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