



## Synopsis

# Effectiveness, safety and cost-effectiveness of methotrexate versus ciclosporin for severe childhood atopic dermatitis: a synopsis of the TREAT RCT

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## Plain language summary

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## Plain language summary

Atopic dermatitis, also known as 'eczema', is a skin disease that presents with itchiness and inflammation (redness, skin dryness, flaking, and thickening). About one-fifth of United Kingdom children have atopic dermatitis and 16% of those children have moderate or severe disease. There are few treatment options available for children with severe atopic dermatitis, and there is a lack of information about the short- and long-term effectiveness of the available medications. The main option for systemic treatment (drug therapies that work throughout the whole body) is ciclosporin, but a medication called methotrexate is being increasingly used. Even though many clinicians prescribe these medications, there was not much information available about the effectiveness, safety, or overall costs. The TREATment of severe Atopic dermatitis Trial compared the effectiveness, cost, and safety of ciclosporin and methotrexate in children with severe atopic dermatitis. The TREATment of severe Atopic dermatitis Trial was a randomised control trial (children are randomly assigned to take either ciclosporin or methotrexate) where patients took one medication for 9 months and we watched their disease for 6 months after the end of treatment. One hundred and three children, between the ages of 2 and 16, were in our trial. The two main goals of the TREATment of severe Atopic dermatitis Trial were to assess changes in disease severity and the amount of time it took for disease to come back after stopping medication. We found that ciclosporin worked faster than methotrexate up until around 20 weeks on treatment. After this, methotrexate became more effective up to the end of treatment. There was also reduced disease activity after treatment was stopped in the methotrexate group, compared to ciclosporin. This was supported by the immunological readouts, which suggested a strengthening of the skin barrier. The results have changed the treatment model for use of conventional systemic medication, favouring methotrexate, also because we found that the medication is more cost-effective.

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