COMPARATIVE EFFICACY OF DIMETHYLFUMARATE AND OTHER TREATMENTS FOR MODERATE-TO-SEVERE CHRONIC PLAQUE PSORIASIS


BACKGROUND

In clinical practice, dimethylfumarate is considered an alternative at the level of conventional systemic drugs in first line (cyclosporine, methotrexate, acitretin).

PURPOSE

To establish whether dimethylfumarate, methotrexate, cyclosporine and acitretin can be considered equivalent therapeutic alternatives (ATE) in efficacy in moderate-to-severe plaque psoriasis (PP).

MATERIALS AND METHODS

We conducted a search of clinical trials of these drugs:

- Phase III ✓
- Efficacy evaluated at 12 weeks or next ✓
- Double-blind ✓
- Uncontrolled disease with topical treatments and/or phototherapy. ✓
- Controlled with methotrexate or placebo ✓
- Adults diagnosed with PP

Results

Indirect Comparison (IC)

<table>
<thead>
<tr>
<th>CYCLOSPORIN</th>
<th>PASI 75</th>
<th>FUMARATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>METHOTREXATE</td>
<td>IC The Bucher Method*</td>
<td>DIMETHYLFUMARATE</td>
</tr>
<tr>
<td>Δ=15%</td>
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*Using the Bucher method, using the Indirect Treatment Comparisons calculator from the Canadian Agency for Health Technology Assessment.

The results were analyzed graphically and the relative position of the 95% Confidence Interval (95%CI) and the equivalence margin was observed. To establish the positioning, the ATE Guide was followed.

RESULTS

Included 4 clinical trials, 2 of cyclosporin, one of dimethylfumarate and fumarates.

The Acitretin studies were excluded because they did not meet the inclusion criteria.

Efficacy

Applying the ATE Guide:

Methotrexate and Dimethylfumarate can be declared ATE, being the probability of clinically relevant difference <50% (most of the 95%CI is in the equivalence range) and the failure does not involve serious/irreversible damage.

Cyclosporine and fumarates could not be considered ATE (the RAR exceeded the delta with more than 50% probability that the difference was clinically relevant).

CONCLUSIONS

- Dimethylfumarate and methotrexate could be considered ATE.
- Cyclosporin and fumarates could not be considered ATE.
- For a definitive statement of ATE, criteria of safety and adequacy should be considered.