Treatment of Adamantiades-Behcet disease with systemic interferon alfa

Zouboulis C C, Orfanos C E

Authors' objectives
To evaluate the efficacy and safety of systemic interferon alfa treatment in patients with Adamantiades-Behcet disease.

Searching
The authors searched the MEDLINE database (1986 through 1997) and the Reference Index Related to Adamantiades-Behcet disease, the Behcet's disease conference proceedings, and abstract booklets using the indexing terms 'Behcet' and 'interferon'.

Study selection
Study designs of evaluations included in the review
Studies, case reports and abstracts. Follow-up ranged from 3 to 18 months in 6 studies, with follow-up not reported in 14 studies.

Specific interventions included in the review
Systemic interferon alfa administered by subcutaneous or intramuscular injections of 3 to 18 x 10(6) units of interferon alfa-2a or 3 to 5 x 10(6) units of interferon alfa-2b daily or 3 times per week for 1 to 60 months.

Participants included in the review
Patients diagnosed with Adamantiades-Behcet disease. Participants were 44% male and 56% female and had a mean age of 34.6 years (age range 12-60 years).

Outcomes assessed in the review
Outcomes assessed were remission of mucocutaneous, ocular and joint manifestations which were graded into four stages:

1. Complete remission, (disappearance of all manifestations during treatment).
2. Partial remission (greater than 50% decrease in the number, severity, duration, and/or frequency of recurrence of the lesions).
3. Stable disease (less than 50% change in the manifestations).
4. Progressive disease (greater than 50% deterioration of existing manifestations or/and the development of new ones).

How were decisions on the relevance of primary studies made?
The authors do not state how the papers were selected for the review, or how many of the reviewers performed the selection.

Assessment of study quality
No formal assessment of quality was undertaken.

Data extraction
One author performed the data extraction and evaluated the studies for sorting into 4 categories:

1. Complete remission.
2. Partial remission.

Methods of synthesis
How were the studies combined?
Efficacy and toxic effects of interferon alfa-2a and interferon alfa-2b were compared by chi-square tests. Differences were considered significant at \( p < 0.05 \).

How were differences between studies investigated?
The authors do not state how differences between the studies were investigated.

Results of the review
Twenty-two studies were included with 144 participants (some participants were shared between studies). Fourteen studies (70 participants) reviewed treatment with interferon alfa-2a and 8 studies (74 participants) reviewed treatment with interferon alfa-2b.

Seventy-four per cent (74\%) of patients with mucocutaneous manifestations, 95\% of patients with uveitis, and 93\% of patients with arthropathy/arthritis exhibited a partial or complete response. Interferon alfa-2a regimens were more effective than interferon alfa-2b ones on mucocutaneous (47\% versus 7\% complete response) and ocular (67\% versus 8\% complete response; \( p < 0.001 \)) manifestations.

Mucocutaneous and ocular manifestations responded within 1 to 4 months after initiation of therapy.

Thirty-eight percent (38\%) of patients with mucocutaneous lesions, 73\% of patients with uveitis, and 88\% of patients with arthropathy/arthritis experienced recurrences immediately or up to 7 months after discontinuation of treatment.

Mild adverse effects were generally recorded; transient influenza-like symptoms (87\% versus 63\%; \( p < 0.05 \)) and reversible leukopenia (24\% versus 4\%; \( p < 0.05 \)) occurred more often under interferon alfa-2a regimens, while reversible mild alopecia was more common in patients receiving alfa-2b (2\% versus 28\%; \( p < 0.01 \)).

Authors’ conclusions
Systemic interferon alfa treatment is reasonable for Adamantiades-Behcet disease. A 3-month high-dose regimen (9 x 10(6) units 3 times per week) followed by a low maintenance dose (3 x 10(6) units 3 times per week) is recommended.

CRD commentary
This is a poor-quality systematic review. The authors have stated their research question but not their inclusion and exclusion criteria. The literature search is good, with no language restrictions on the search, but the authors may have missed studies published outside the United States by restricting the search to only two databases.

The types of study designs included are not stated and there are no randomised controlled trials. The quality of the included studies was not formally assessed and the authors have not reported on how the articles were selected, or how many of the reviewers were involved in the data selection. It is reported that only one of the authors performed the data extraction.

The data extraction is reported in tables and text and it is possible that the statistical pooling may not have been appropriate given the lack of information about the pooled studies. There were no tests for heterogeneity but the authors have discussed methodological and data limitations in the review.

The authors conclusions appear to follow from the results but should be viewed with great caution because of the stated
methodological limitations of the review.

**Implications of the review for practice and research**

Practice: The authors do not state any implications for practice.

Research: The authors state that a controlled trial is essential to confirm the efficacy of interferon alfa in Adamantiades-Behcet disease.

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This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.