Prolonged Corticosteroid Treatment in the Management of Temporal Arteritis

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Summary. Twenty-four patients with biopsy proven temporal arteritis were followed for 7 years and the effect and duration of corticosteroid treatment was evaluated. An initial dose of 35 mg prednisone daily was sufficient to control symptoms and signs in most of the patients. Flare-up rates upon corticosteroid reduction were high, especially in the first 24 months of treatment. Flare-ups were more common (> twice) in “non-western” Jews as compared to “western” Jews. Serious corticosteroid side effects were uncommon. Corticosteroid treatment was withdrawn from 7 patients after 5 years; two of these patients suffered flare-ups within 16 months. Nineteen patients remained on prednisone, in an average dose of 4 mg/day, 7 years after diagnosis. Thus, corticosteroid treatment in temporal arteritis should be prolonged in the majority of patients.

Key words: Temporal arteritis – Corticosteroid treatment

Temporal arteritis (T.A.) or giant cell arteritis, is a well-known clinical entity occurring in the elderly, first described almost 100 years ago by Hutchinson [1]. The underlying pathological abnormality is granulomatous arteritis affecting medium and large-size arteries with predisposition to the cranial arteries [2–4]. Temporal arteritis is a systemic disease. Symptoms and signs are diverse and include headache, malaise, fever, myalgias and jaw claudication [5–7]. The temporal artery is nearly always affected. An important complication of the disease is loss of vision due to involvement of the ophthalmic and ciliary arteries [8–10]. The primary objectives in managing patients with temporal arteritis are to control the systemic manifestations and to prevent and treat the ocular symptoms.

Most investigators agree that once the diagnosis is established, corticosteroid treatment is mandatory. However, there is a difference of opinion among clinicians regarding the dose and duration of treatment. The present study extends our initial, previously published observations [7] and was designed to evaluate the experience with prolonged corticosteroid treatment, in 24 patients with biopsy proven temporal arteritis.

Patients and Methods
The study population consisted of twenty-four patients and all met the clinical and histopathologic criteria for diagnosis of temporal arteritis [7, 11, 12]. After diagnosis, the patients were enrolled in a prospective clinical investigation and were followed at 2- to 4-month intervals in the outpatient clinic of the Department of Medicine, Hadassah University Hospital. During the visit, all patients provided a medical history and underwent a physical examination. Blood specimens were obtained for ESR, complete blood count, and biochemical screening.

All patients were treated with corticosteroids in the form of prednisone. The initial dose prescribed at the time of diagnosis for patients with temporal arteritis without visual symptoms was 20–30 mg daily. However, patients with visual disturbances were started on 45–60 mg prednisone daily. Corticosteroid treatment was adjusted to keep the patients symptomless and the value of ESR below 35 mm/hr. When this was achieved, the dose of prednisone was decreased by 2.5 mg/day.
Diagnosis of flare-ups was made on recurrence of either one or more of the clinical symptoms summarized in Table 1, elevation of the ESR value above 40 mm/h, or both. When a diagnosis of flare-up was made, the dose of prednisone was increased immediately by 20 mg a day and if this was insufficient, the dose was increased by an additional 10 mg daily.

For the purposes of this study, "western" Jews were defined as those born in Europe or America and those born in Israel to fathers born in Europe or America. "Non-western" Jews were defined as those born in Israel to fathers born in Africa or Asia [13].

For statistical analysis, group data were compared using the paired Student's t test. A probability (p) value of <0.05 was considered statistically significant.

The collection of data was completed for each patient 7 years after entry to the study group.

Results

Eleven of the patients were male and 13 were female. Fourteen were "western" Jews and 10 were "non-western" Jews. The age varied between 65-79 years. No significant difference was observed between the sexes (73 ± 6 and 75 ± 9, mean ± SD) for males and females, respectively (Fig. 1).

All patients were treated with prednisone. The mean initial dose was 35 mg/day and the duration of follow-up was 7 years. The mean dose of prednisone 7 years after onset of treatment was 4 mg/day (Fig. 2). The mean dose of prednisone decreased by 50% during the first year of follow-up, by 29% in the second year, and by 20% after the third year. However, almost no change in the mean dose of prednisone was observed during the last 3 years of follow-up. Nineteen patients received a small dose of steroids 7 years after diagnosis was made. Repeated attempts during the years at steroid withdrawal or switching to alternate day treatment were unsuccessful, and daily treatment had to be reinstated.

Fifty-eight flare-ups were documented in the 24 patients during attempts to reduce the steroid dosage or to switch to an alternate day regime. Sixty-six percent of the flare-ups occurred within the first year of prednisone treatment and 39% and 16% in the second and third year of treatment, respectively. In 7 patients, corticosteroids have been completely withdrawn after 5 years of treatment. Five patients were doing well with no evidence of active disease two years after treatment was stopped. In two patients, steroid treatment was reinstated because of a flare-up 6 and 15 months after steroid withdrawal, respectively. The histopathology of a repeated temporal artery biopsy specimen in one of these patients demonstrated granulomatous arteritis. In 11 patients out of 24, no flare-ups were recorded during the 7 years of follow-up.

The most common symptoms at times of flare-up were fatigue and muscle discomfort, which were experienced by 80% of the patients. Fever and headaches were also documented, but to a lesser extent. The erythrocyte sedimentation rate was increased in 75% of the patients. No correlation was found between symptoms at time of diagnosis and during flare-ups (Table 1).

No significant differences were found regarding the duration of symptoms before treatment, the starting dose of prednisone, the age of onset, the ESR and hemoglobin values between the 13 patients with temporal arteritis who had flare-ups during corticosteroid reduction or withdrawal and those who did not (Table 2). Of particular interest