Clinical Study
Weight Gain and Hair Loss during Anti-TNF Therapy

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1. Introduction

Decrease in lean mass can occur in patients with chronic advanced diseases and has been described in chronic inflammatory diseases such as Rheumatoid Arthritis (RA), where it may result in profound weight loss [1]. These changes are linked to the effects of cytokines such as TNF-α and interleukins and also the level of disease activity.

In recent years, a growing number of biological agents have been introduced for the treatment of various diseases one of them is anti-TNF therapy which is approved for the treatment of many patients with inflammatory arthritis who fail to gain satisfactory disease control with conventional disease-modifying antirheumatic drugs (DMARDs). In randomized clinical trials (RCTs) all of these agents have been shown to be effective in reducing clinical signs of inflammation in RA, spondyloarthropathy.

Adverse effects of anti-TNF therapy include activation of infections and reactivation of latent TB. Less critical adverse effects are weight gain which is rarely reported in small observational studies in RA and spondyloarthropathy [2–5] and hair loss (alopecia areata or generalized alopecia) which has been reported as case report mainly in psoriatic patients on anti-TNF therapy [6, 7]. These effects may be of great concern to some patients, especially females, and despite the benefits of these therapies, the adverse effects may lead to discontinuation of anti-TNF therapy.

We conducted this retrospective study in Hamad Medical Corporation to find out the incidence of these adverse effects in our patients on anti-TNF, and how often a decision is taken to discontinue treatment because of these adverse effects.

2. Methods

All patients on anti-TNF treatment for rheumatic diseases that are being followed in our rheumatology clinic in Hamad Medical Corporation were interviewed by the authors. Data collected included age, gender, name of the present, and previous anti-TNFs; patients were asked whether they had gained weight or developed hair loss while on anti-TNF and if a decision had been made to discontinue the anti-TNF therapy because of these adverse effects.
there was no other reason to explain it. The patient’s file was reviewed to verify the documentation of the hair loss and if discontinuation of the anti-TNF was due to hair loss in the opinion of the physician.

Weight gain was considered as an adverse effect if it was reported by the patient and it was noticed by the patient after starting anti-TNF therapy and there was no other obvious reason for it. The files of patients with weight gain were reviewed to determine the timing and the degree of weight gain after starting anti-TNF therapy and if the weight gain had resulted in discontinuation of the anti-TNF.

3. Results

Of 150 of patients on anti-TNF (82 RA, 34 ankylosing spondylitis, 32 psoriatic arthritis, and 4 for other indications), 20 (13.3%) cases were reported weight gain in first year while on anti-TNF (18 females and two males). The range of weight gain was from 2.2 kg to 12 kg with an average weight gain of 5.5 kg. The pretreatment average of BMI was 31.2 and after treatment was 35.8. Anti-TNF was discontinued in 5/20 (25%) due to this adverse effects. Ten patients were on etanercept, eight on adalimumab, and four on infliximab. Two of the twenty patients developed weight gain on two consecutive anti-TNF infliximab and adalimumab. Glucocorticoids were used in 6/20 of our patients in dose (5–10 mg of prednisolone) and was started before anti-TNF.

Hair loss after using anti-TNF was reported in five female (4 SPA, 1 RA) patients (3.3%); anti-TNF was stopped in all of them. Two were on etanercept, eight on adalimumab, and one on infliximab.

Hair loss improved after discontinuation of anti-TNF in all patients.

4. Discussion

A significant number of our patients on anti-TNF (13.3%) developed weight gain with an average of 5.5 kg (average BMI changes 4.7) and it led to discontinuation of anti-TNF in 25% of them, representing 3.3% of all the patients on anti-TNF therapy. Though the incidence of hair loss was in 25% of them, representing 3.3% of all the patients on BMI changes 4.7 and it led to discontinuation of anti-TNF after 12 months of treatment (mean, 4.17; range, 0.5–13 kg) [3]. A very recent study investigated the effects of infliximab on body composition in a randomized study with 25 patients [4], an increase in fat mass was observed in those patients randomized to infliximab after 21 months of treatment but not in those patients randomized to DMARDs alone. Weight gain has also been observed in a number of chronic inflammatory conditions other than RA, which have been treated with anti-TNF therapy. In a study of 106 patients with ankylosing spondylitis (AS), a significant increase in weight was observed after 12 months of treatment with anti-TNF therapy (2.2 ± 3.9 kg), which remained elevated at 24 months [5].

Hair loss (Alopecia areata) has been reported in many cases [6, 7]. Ferran et al. from Spain reported five cases of alopecia areata (AA) and reviewing the literature they found 11 cases of AA induced by anti-TNF-α therapies [6].

This data showed that weight gain and hair loss associated with anti-TNF therapy are not rare side effects and may result in discontinuation of anti-TNF. Further prospective studies are needed.

References


