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Effectiveness of Natural Treatments for Psoriasis: A Periodical Article

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Abstract
Background: it is indicated that Biological Therapies has great effect in dealing with Psoriasis. Differences in response rates of biologics for the treatment of moderate-to-severe plaque psoriasis have been reported in many published articles.
Objective: this paper aims to declare the effectiveness of biological therapies for psoriasis. Methods: using the search engine PubMed to prepare comprehensive literature about the specified topic.
Main results: it is indicated that psoriasis is a chronic inflammatory skin disease condition that involves altered expression of a broad spectrum of proinflammatory cytokines which are associated with activation of T cells and proliferation of keratinocytes.
Conclusion: The introduction of targeted biologic therapies has greatly improved the treatment options for psoriasis although the pathogenesis of the autoimmune skin disease has not been fully elucidated. The potential for psoriasis disease is implicit because altered expressions of cutaneous and systemic cytokines are well demonstrated in psoriasis patients.

Keywords: Biological, Infliximab, Efalizumab, Adalimumab, Ustekinumab, Alefacept

1. Introduction
Psoriasis is a clear disease that has much interest. It is a chronic and immune-mediated skin disease that also has systemic manifestations. Safe and effective treatments are required. Biologic treatments that inhibit the immune pathogenesis of psoriasis have helped meet this need. Psoriasis is the most prevalent immune disease in the US, affecting 2-3% of the general population. 'It is associated with numerous systemic effects including cardiovascular disease, the metabolic syndrome, and increased risk for lymphoma. Furthermore, up to 30% of psoriatic patients may develop psoriatic arthritis. Psoriasis can be clear and presented in the skin by scaly skin lesions and erythematous In a study it is indicated that FDA-approved regimens of adalimumab, infliximab, ustekinumab, and alefacept were effective in treating moderate-to-severe psoriasis. It is weighted in the range of PASI-75 scores for infliximab, ustekinumab, alefacept adalimumab, and etanercept are 78.6%, 72.1%, 70.5%, 48.1%, and 21%, gradually. In fact, this study aims to identify the Efficacy of Biological Therapies forPsoriasis. In order to achieve the research objective, there was a great need to collect valuable information and data about the topic. Throughout Clinical trials, they present improvements whether they are in physical or health which is related to life quality (HRQoL) that measures in patients with psoriasis treated with biologics compared with placebo. Moreover, these reports give few description of the meaning of Dermatology Life Quality Index (DLQI) degrees and supply few comparisons of data.

2. Methodology
The main methodology employed here is to use the PubMed as research engine and reviewing English articles that were published about human subjects in order to collect the required data and information following parts illustrate the main biological therapies for psoriasis. it is indicated that the most outstanding biological therapies are Efalizumab, Infliximab, Adalimumab, Ustekinumab and Alefacept.

3. Results
The studies showed that Efalizumab is considered as one of a recombinant humanized monoclonal (IgG1) antibody which directed against the a subunit (CD11a) of LFA-1 found on the surface of T-cells, blocking LFA-1 mediated T-

cell adhesion. It is administered subcutaneously (SC), with a recommended dose of 0.7 mg/kg in the first week, followed by 1 mg/kg SC every week for the next 11 weeks. Efalizumab received its psoriasis indication in October 2003. Multiple phase III clinical trials have assessed the safety and efficacy profile of this one , but only during 3–6 months of therapy. Efalizumab has recently been removed from the market in Europe and has renewed warnings from the FDA because of concerns of rare cases with increasing multifocal leukoencephalopathy after long usage. Efalizumab has one prospective long-term trial to date in the treatment of psoriasis. Throughout this open label, it is clear to multicenter phase III study about 339 patients with moderate-to-severe chronic plaque psoriasis were randomized into the initial 3-month phase to receive subcutaneous efalizumab 2 mg/kg weekly, with an added randomization to receive concomitant fluocinolone acetonide ointment or a placebo equivalent from Weeks 9 through 12. ITT analysis was performed on the 339 participating subjects and those that did not achieve at least 50% improvement (PASI 50) were considered non-responders and discontinued from following into the next phase. The second phase was a long term observational period using last focus of observation can be done forward (LOCF) analysis, that patients achieving a 50% PASI score were eligible to receive efalizumab can be taken as 1 mg / kg in a week for thirty three months. Then the final 3-month treatment period was an optional transition period for patients who completed the second phase before efalizumab became commercially available.

It is presented as Remicade; Centocor, Inc., Horsham, PA and it is a chimeric monoclonal antibody that binds soluble and membrane-bound TNF-a approved by the FDA in 2006 for the treatment of moderate to severe psoriasis. The recommended dosage for infliximab is 5 mg/kg IV infusion, to be administered at baseline, and then repeated at Weeks 2, 6, andthenevery8weeks(Q8W)thereafter. Whereas the infliximab effect in psoriasis has been studied in numerous clinical trials, two phase III studies focused on the long-term efficacy of this drug in the treatment of this chronic condition.

It was approved in January 2008 by the FDA for the treatment of plaque-type psoriasis, for which it is managed every other week by subcutaneous injection. It is a recombinant, fully human immunoglobulin G1 (IgG1) monoclonal antibody that related with specificity and high affinity to TNF-a (45). The majority of responses attributed to TNF are arranged by the p55 cell surface TNF receivers. Upon binding to TNF-a, adalimumab blocks its interaction with the p55 and p75 cell surface TNF receptors. This process of neutralization of TNF-a by a specific monoclonal antibody should improve both skin and joint manifestations of psoriasis.

It is considered as a fully human monoclonal antibody that aims at interleukin-12 (IL-12) and interleukin-23 (IL-23). It is related to high affinity to their shared p 40 sub branch , neutralizing their bioactivity by blocking interactions with their cognate receptors. This agent thus targets Th1 and Th17 arms of immunity, both of which we now know are pivotal in the immune patho-genesis of psoriasis.

It is considered as a fully human (LFA-3/IgG1) fusion protein that, by targeting CD2, inhibits T-cell activation and proliferation, and induces the selective apoptosis of memory T-cells (CD45RO+) (17,18). It was the first biologic agent to receive FDA advise as a treatment of chronic plaque psoriasis, in January 2003. The alefacept selective immune modulatory effect, which inhibits only the pathogenic memory effector T-lymphocytes, has given the agent the perception of one of the best safety profiles among members of the biologics family. Unfortunately, this selective mechanism of action has also resulted in a lesser short-term efficacy profile with the PASI 75 of 21% evaluated at 14 weeks of therapy (19). Little data has been published in regards with the long-term use of alefacept. Alefacept reduction of CD4 counts has resulted in a dosing schedule that requires periods on and off of the medication. The medication is given as a 15-mg intramuscular (IM) injection every week for 12 weeks, followed by a 12-week drug-free interval, possibly followed by another 12-week course if there is normal CD4 count (20). This contrasts to other biologics that are given on a continuous basis, making alefacept efficacy analysis difficult to compare with other agents. Most reports on multiple courses of alefacept refer to a second dosing cycle. For this review, in orderto consider long-term use, the subject must have received at least three dosing cycles (12 weeks each), with their equivalent drug-free cycles adding up to 48 weeks of therapy. It can be done through long-term use of alefacept that has been assessed in patients to participate in phase III trials and later enrolled in extension studies. Short term analysis demonstrated that only a small proportion oftreated individuals achieve PASI 75 (21). For those who do respond, successive treatment cycles can be of added benefit, with extensive remission periods and limited adverse effects.

4. Discussion

It is indicated that despite of relation of therapy and biologic agents is widely used in the care of rheumatoid arthritis and psoriatic arthritis, there are only a few small-scales and randomized trials that are performed in patients with psoriasis. In many cases, studies of combination therapy with biologic agents are conducted against a background of treatment with traditional systemic therapies, like methotrexate, in persons without a suitable response to that treatment. Moreover , a lot of the studies were carried out in patients with psoriatic arthritis; the result of therapy on their psoriasis was also checked as a secondary consideration. Lately, the European consensus conferences presented some recommendations for combining biologic and traditional systemic psoriasis therapies to supply some level of structure for this practical way. Studies have suggested that patients experience slight reductions in their clinical responses after their dosing schedule is cut, thus the results presented by the long-term study might not reflect the clinical responses that

could be obtained with a long-term etanercept regimen, perhaps creating unrealistic expectations among physicians and patients Infliximab long-term efficacy was demonstrated with clinically significant improvements. Loss of response during the maintenance phase is not entirely understood, but may be a result of lower serum concentrations in the maintenance phase compared with the induction phase, and the formation of neutralizing antibodies. Similar to previous studies of biologics, efficacy data were analyzed based on an ITT analysis, which may bias the efficacy levels to present more favorable long term results. Overall, infliximab demonstrated the greatest short-term efficacy results but had a much more moderate effect when long-term treatment was evaluated. The long-term trials studying adalimumab demonstrated that this biologic is highly efficacious for patients with moderate to severe plaque-type psoriasis, with sustained clinical responses over several months of therapy.

5. Conclusion

The analysis illustrates that the treatment strategy for psoriasis depends on a variety of factors (e.g., the medical history, tolerability of therapiesand potential for side effects, and disease severity). Regarding disease severity, there is no commonly accepted definition of mild versus moderate-to-severe psoriasis. Moreover,a patient may have mild disease on the basis of body surface area (BSA) involvement, but localization oflesions in vulnerable areas (e.g., the face, feet, hands, and/or genitals) may warrant systemic therapy. Some guidelines provide specific criteria to help evaluate the severity of a patient's psoriasis, but all recognize the importance of assessing both the physical and psychosocial burden when considering the best treatment approach

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