

An Adjuvant Capsule in the Treatment of Pemphigus Vulgaris: A Novel Hypothesis

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Abstract

Pemphigus vulgaris (PV) is one of the most common and studied autoimmune disorders of skin. The knock down of desmogleins in the skin by IgG antibodies will eventually leads to mucocutaneous problems in both genders. Targeting the cardinal molecules involved in the pathways of immune response is the main goal of given therapy. With regard to the side effects of long term use of immunosuppressive treatments, patients may use various adjuvant drug combinations. Sulfasalazine (SSZ) and Pentoxifylline (PTX) are two low-cost anti-TNF medications that can halt the acantholysis in PV. Tetracycline is an effective antibiotic with immunomodulatory properties on down-regulation of pro-inflammatory molecules such as NO, IL-1 β . Moreover, the anti-inflammatory effects of Omega-3 take this supplement into account as a potential addition to anti-PV armamentarium. Thus, this complex could be utilized as a safe and effective adjuvant capsule against PV. [GMJ.2014;3(3):200-1]

Keywords: Pemphigus Vulgaris; Adjuvant; Skin; Hypothesis

Dear Editor

Pemphigus vulgaris (PV), an acquired autoimmune skin disorder is a life-threatening chronic bullous dermatosis characterized by circulating IgG antibodies against desmogleins 1 and 3. As the desmosomal proteins are targeted, patients suffer from intraepidermal cleft, mucocutaneous blistering, and painful erosions on skin [1]. PV approximately affects both genders equally with the average onset age of between 50-60 years. Higher prevalence of the disease have also been observed in some parts of Asia and the Mediterranean. Without treatment, PV has been noted frequently fatal with a high mortality rate. Most of the therapeutic strategies in the treatment of PV include corticosteroids

and cytotoxic medications as the key drugs [2]. Despite the large reduction in PV mortality resulting from systemic corticosteroids and immunosuppressive agents as the mainstay therapy, the side effects of the immunosuppressive treatments have restricted therapeutic options and the disease still carries considerable morbidity and mortality. Thus, as a disease with challenging treatment, many adjuvant therapies with different protocols, including steroid sparing agents (immunosuppressive agents and anti-inflammatory agents) and immune modulator drugs, have been suggested to enhance the recovery process of patients [1,3]. With regard to previous studies on the use of different treatment methods, we

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suggest a new effective and safe adjuvant drug combination, comprising Sulfasalazine, Pentoxifyllin, Tetracycline and Omega-3 as an adjuvant therapy for PV. This adjuvant combination could be added to the steroid added immunosuppressive therapy to enhance the efficacy of the treatment. Hence, it would be of greater value in the management of difficult cases and those who show side effects to the standard treatments with higher doses. Several studies have recently focused on the role of tumor necrosis factor (TNF)- α as a possible agent involved in the underlying mechanism of acantholysis in PV; therefore, the use of anti-TNF drugs as adjuvant therapy for PV has been suggested. Among the anti-TNF drugs, Sulfasalazine (SSZ) and Pentoxifylline (PTX) are both considered as less-expensive medications with high anti-TNF properties. In a study conducted by El-Darouti *et al.*, significant decrease in the serum level of TNF- α and rapid improvement in patients' conditions were observed [4]. A group of certain antibiotics including Tetracycline can act as immunomodulatory factors by influencing cytokines involved in the inflammatory process and down-regulation of pro-inflammatory molecules such as NO, IL-1 β and TNF- α [5]. The effectiveness of tetracycline, a safe immunomodulating drug with low toxicity, as an adjuvant therapy for autoimmune bullous dis-

eases such as PV has been proved [6]. Daily use of Minocycline, a subclass of tetracycline, has also been reported with a steroid sparing effect as an adjuvant drug [7]. Omega 3 fatty acids exert immunomodulatory activities by regulating intracellular signaling pathways, transcription factor activity, and gene expression. Regarding the anti-inflammatory effects of Omega-3, the use of this agent as a supplement might improve conditions of patients suffering from inflammatory and autoimmune diseases such as PV. In many of the placebo controlled trials, Omega 3 has decreased disease activity and the use of anti-inflammatory drugs in treatment of chronic inflammatory diseases [8]. Thus, this combination could be a safe and effective adjuvant capsule in the treatment of Pemphigus vulgaris.

Conflicts of interest

Authors declare that they have no conflicts of interest.

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