# Psoriasis drug use survey

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## Abstract

Psoriasis is a chronic immuno-mediated inflammatory disease of 2.3% prevalence in Iraqi the etiology of the disease is not identified well. A wide variation in disease picture and response to treatment occur due to the complexity of the disease. The study includes 75 male and female people diagnosed with psoriasis. General data and treatment used have been analyzed. A questionnaire is prepared. The study shows that there were twenty-one patients aged between 15 and 24 years, thirty-three patients aged between 25 and 34 years, eight patients aged between 35 and 44 years, and thirteen patients were identified as being older than 44 years. The study shows that the distribution of patients is such that fifty-five percent are male, while forty-five percent are female. Betamethasone was most steroid used. Most of the patients repeat the treatment courses more than two times and most of the patients participated in the study use only one drug. In Conclusion both topical and systemic treatment is used and mostly steroids were the common used group.

**Keyword:** Psoriasis, skin, blepharitis, immuno-mediated inflammatory

## Introduction

Psoriasis is a chronic immuno-mediated inflammatory disease of 2.3% prevalence in Iraqi [1]. The etiology of the disease is not identified well. A wide variation in disease picture and response to treatment occur due to the complexity of the disease. Most of the patients have mild severity which accounts less than 3% from surface area of the body (2). The distribution and size of clinical feature determine the classes of psoriasis like erythrodermic, guttate, pustular, and plaque types (3). Little of patient about one from six seek a consultation about their psoriasis and other try to treat themselves by over the counter drugs or stay untreated at all. furthermore, psoriasis highly affects the patient life quality(4). The psoriasis pathophysiology showed a genetic defect that a polygenic inheritance with different penetrance. Two types are known; type one psoriasis which start early before forty years and have a positive history of family and sporadic type two psoriasis which start after forty years with no family history (5). The common signs of psoriasis showed red patches or rashes, skin inflammation, often silvery-loose scales covered. In advanced severe type, the plaques will increase and merge by others, covering larger areas. This lead to a bloody cracked painful itchy skin (6). The complication of psoriasis includes blepharitis, conjunctivitis, blepharitis in the eyes. Others like obesity, type II diabetes, increase blood pressure, hypercholesterolemia, depression, kidney disease, Parkinson's disease, Crohn's disease, metabolic syndrome, cardiovascular diseases like abnormal heartbeat and atherosclerosis (6).

Two approach of treatment is used. Topical treatment is preferred always as a first-approach treatment, but the systemic approach account more than 2/3 of other cases (7). The medical topical treatment includes topical corticosteroids which is stone corner of psoriasis treatment. The different steroids are different in potencies and dosage forms. When they bind intracellular to a corticosteroid receptor, they produce different effect like

antiproliferative, anti-inflammatory, vasoconstrictive and immunosuppressive effects. Keratolytic agents like salicylic acid and tar are effectively used in cases of localized psoriasis mainly the scalp. They enhance corticosteroid penetration (8). Anthralin 1% cream is used to the scalp and skin daily for thirty minutes and washed off. It is still having unknown mechanism. Anthralin is more beneficial when used with topical steroid treatment or phototherapy (9). Moisturizing agent can increase the hydration of skin by two ways. First, hydrophobic emollients as petrolatum give occlusive benefits; they make a physical barrier for protection on the skin surface that decreases epidermal loss of water. Second benefit, hydrophilic emollients as glycerin give humectant benefits, they act to extract moisture from air and keep skin water content (10). Calcitriol and calcipotriene as analogues of vitamin D are vitamin D3 synthetic derivatives. They are used topically for plaque psoriasis, for systemic treatment a nonbiologic Agents are available like methotrexate, cyclosporine, retinoid, fumaric acid, and apremilast (8), while the biologic agents include Interleukin-17A Inhibitors (like secukinumab) and interleukin-23 Inhibitors (like guselkumab)(11) are used. Also, TNF-α blockers (like etanercept) (8) and interleukin-12/23 inhibitors (like ustekinumab) are beneficial also (9). The aim of the research is to evaluate drugs used in treatment of psoriasis.

## Materials and methods

The study includes 75 male and female people diagnosed with psoriasis who had newly prescribed a systemic or topical treatment. general data, psoriasis severity, treatment used and side effects have been analyzed. A questionnaire is prepared. It was translated into Arabic. Later the printout is taken and the questions are asked to the patients in private and hospital dermatologic clinic. The research is authorized by the Al- Nahrain university- College of pharmacy in 11-10-2023.

## Result

The study shows that there were twenty-one patients aged between 15 and 24 years, thirty-three patients aged between 25 and 34 years, eight patients aged between 35 and 44 years, and thirteen patients were identified as being older than 44 years. The study shows that the distribution of patients is such that fifty-five percent are male, while forty-five percent are female. The study reveals that forty-four percent of patients possessed a history of psoriasis, whereas fifty-six percent did not. The study shows that fifty-seven percent of patients exhibited moderate psoriasis, while twenty-seven percent exhibited mild psoriasis. Sixteen percent of patients were identified as having severe psoriasis. Other results are shown in the figures 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10 respectively.

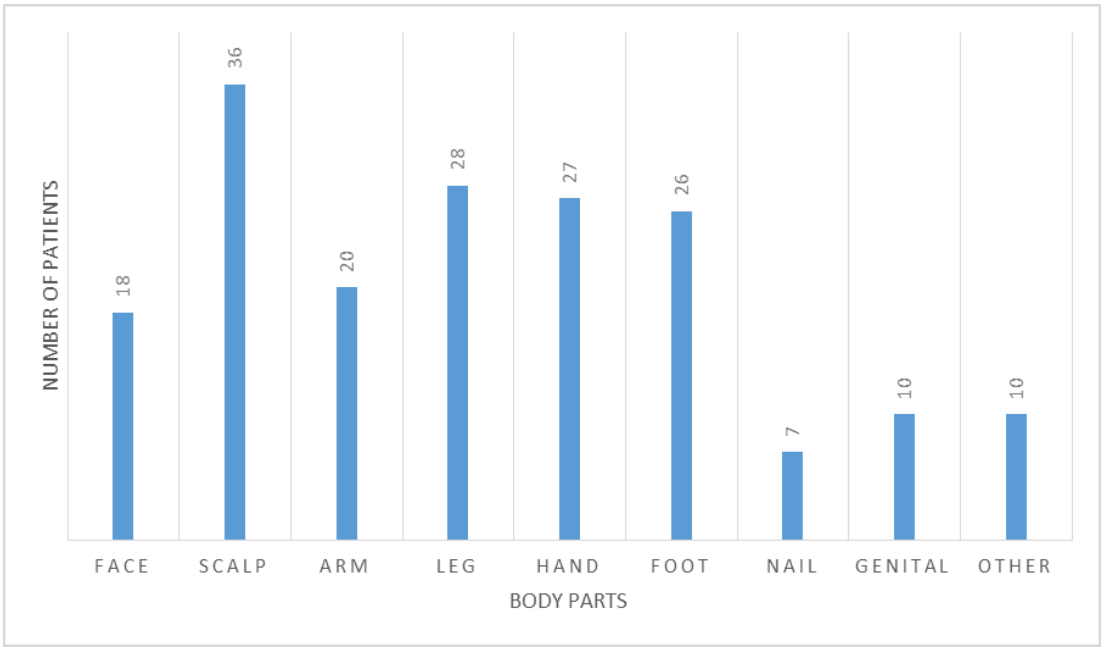


**Figure 1. The affected parts of the body with psoriasis.**

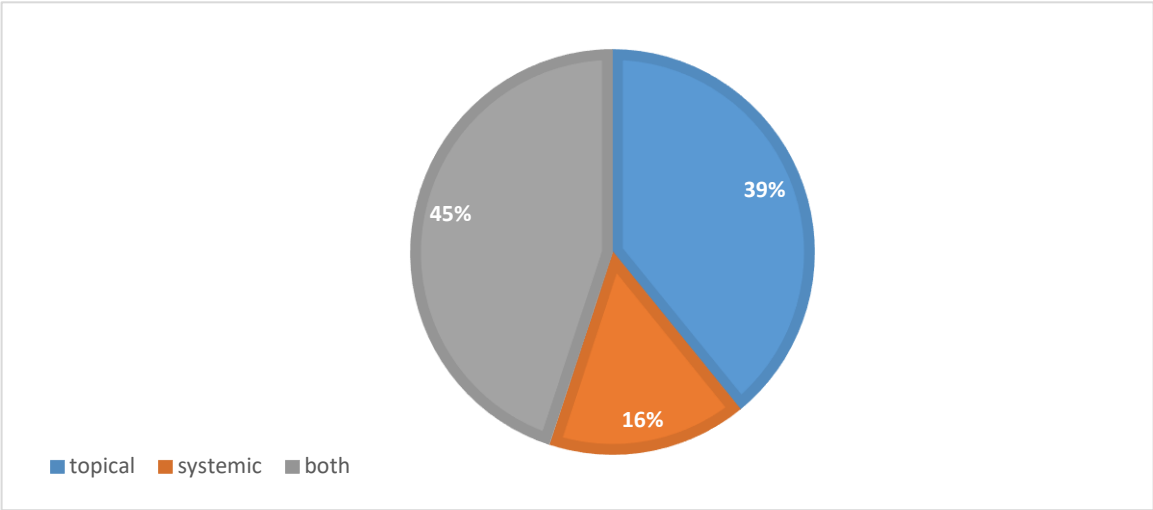


**Figure 2. Percentage of patients that take treatment and non-pharmacological treatment.**

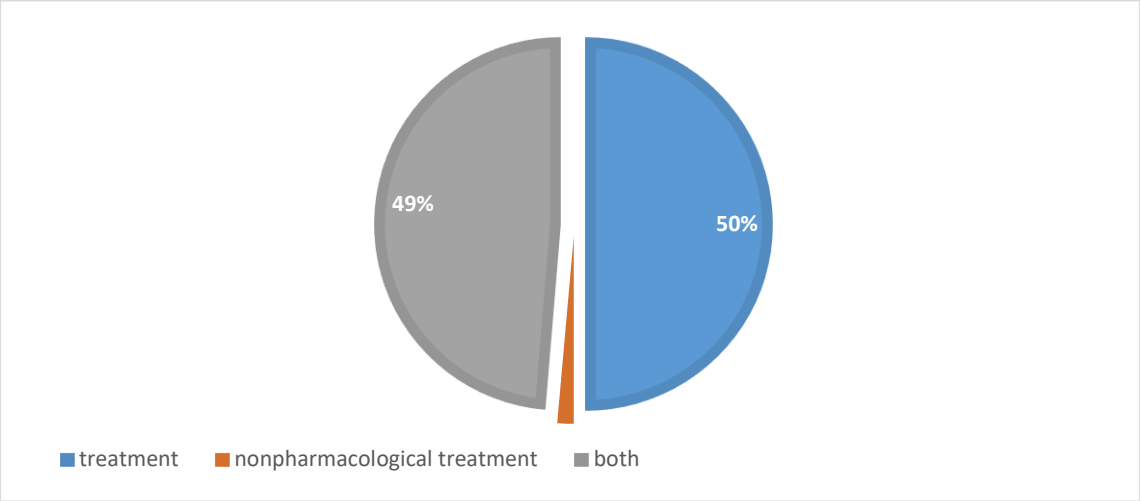


**Figure 3. Type of treatment used.**

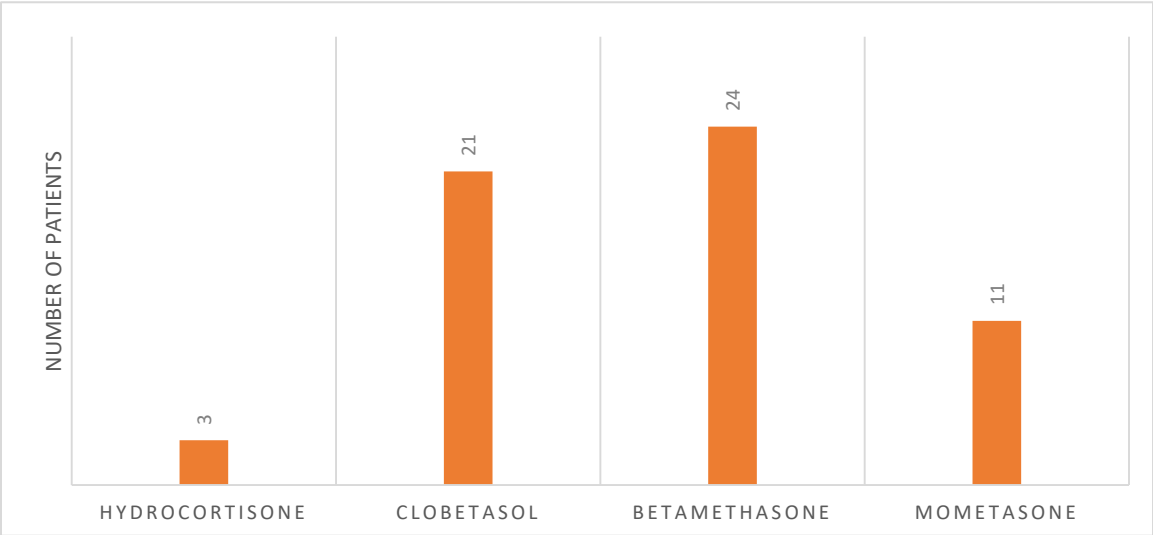


**Figure 4. Treatment options.**

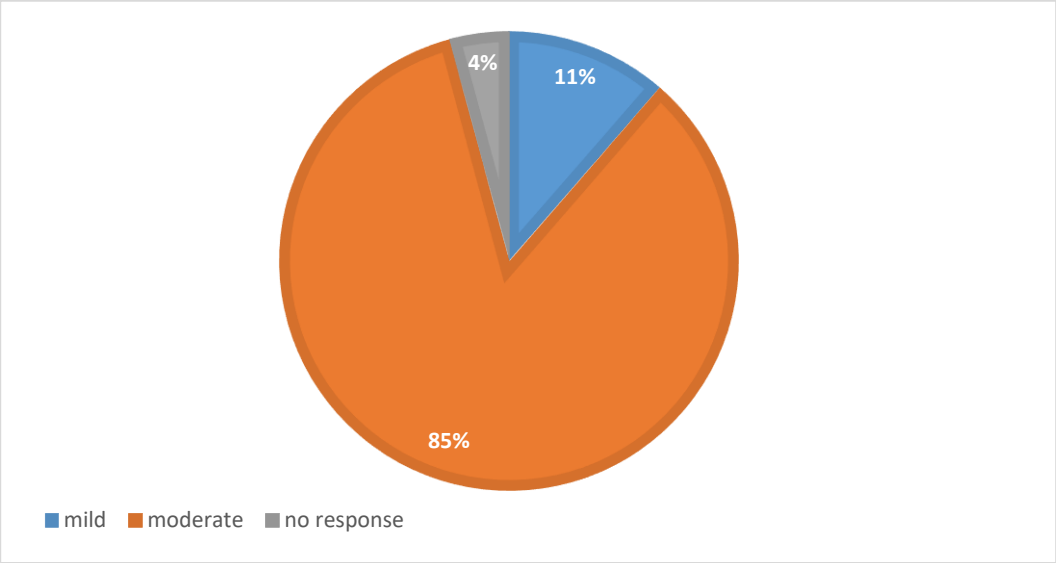


**Figure 5. Most common steroids used.**

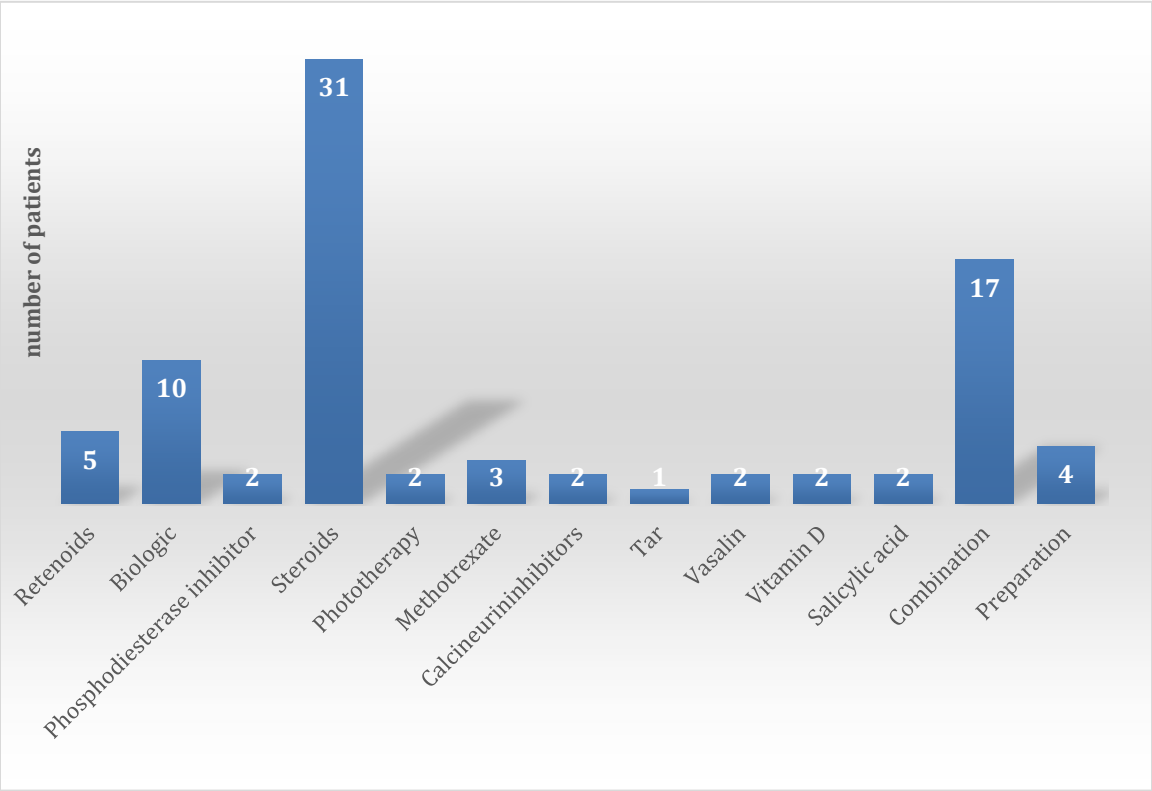


**Figure 6: The best response therapies**

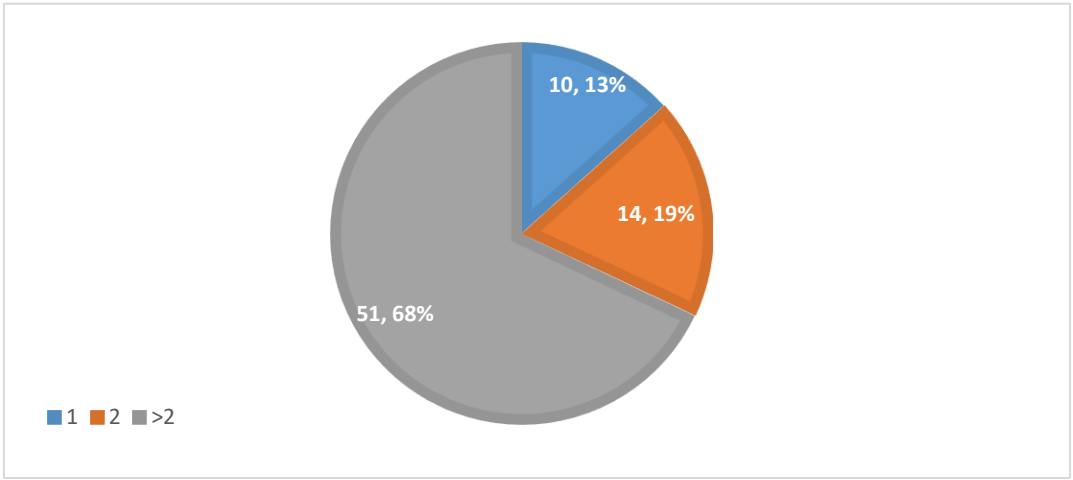


**Figure 7. Repetition of courses.**

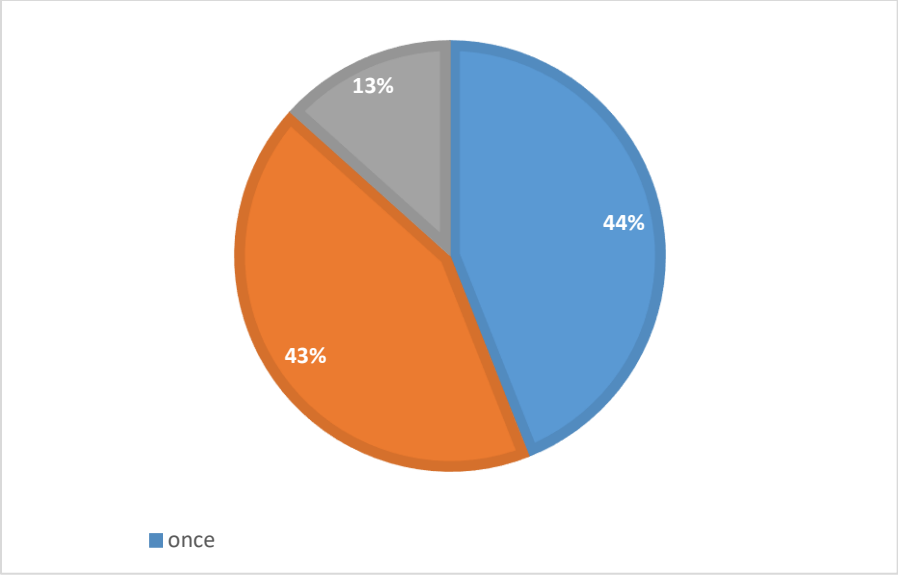


**Figure 8. Daily dosing regimen.**

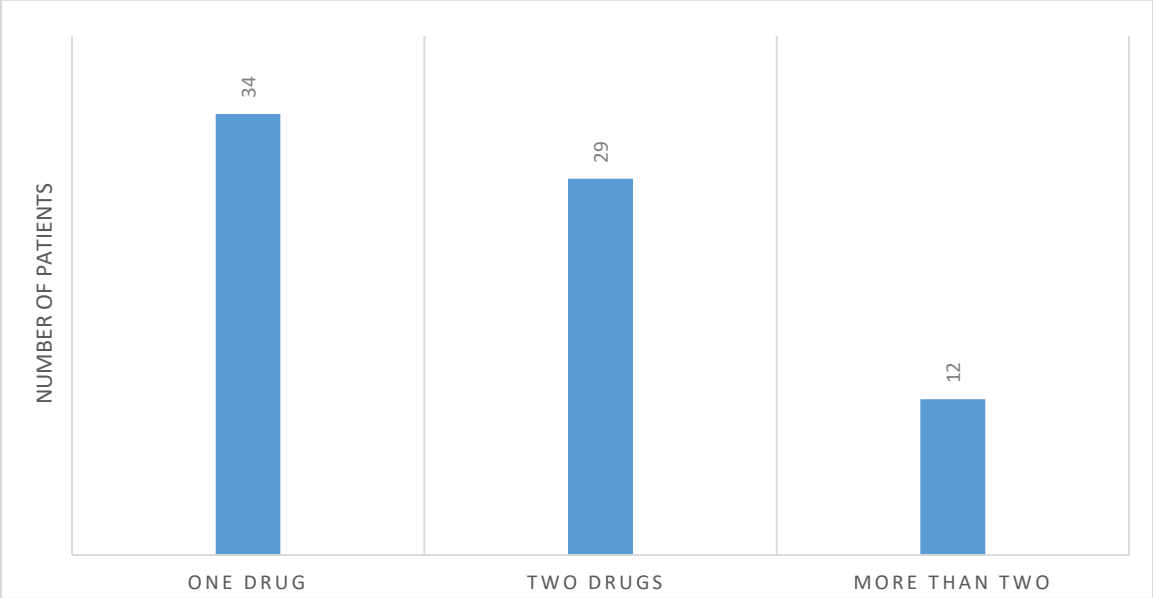


**Figure 9. Number of patients based on the number of drugs they used.**

## Discussion

Psoriasis is a chronic complicated inflammatory autoimmune disease [12], (13). It is characterized by remission and sometimes exacerbation (14). Prevalence of the psoriasis is different from study to study [15], ranging about 1 - 3% in the world [16]. In this study, age distribution, the proportion of the patients increased gradually after the age of 20 years, peaked in the 25–34 years old group, and then subsequently decreased. A systematic review also showed that, increase prevalence of psoriasis with increase age (17). This is not similar to a study of Sinniah et al. (18) that have showed, the percent of psoriatic patients peaked from 40–60 years old age for male and female, and that a smaller age and older group age had low proportions relatively. When it comes to sex differentiation, the study has found that males 55% and females 45%. In a systematic review, one hundred fifty-nine studies showed psoriasis were diagnosed, some of those study compare the psoriasis prevalence in men and women (19). Some of the studies used in this review with also a study from Denmark showed individuals from all ages showed the females are of higher prevalence (20). Other study showed different result, where the male patients having more prevalence (21). However, other studies showed psoriasis prevalence between not different between male and female (19). In relation to family history, we found 44% of patients had family history. The values of psoriasis family history different in the world (2 to 91%) (22). When it comes to Affected parts of the body with psoriasis in (figure 1) showed psoriasis distribution in different body parts. It showed that the scalp was the most commonly affected area, with thirty-six patients experiencing symptoms. This is identical with another study conducted in Iraq that said, the most common affected part, was the scalp, this probably may be due to the disease first

start in the scalp mostly (23). The psoriasis severity in this study showed that fifty-seven percent of patients exhibited moderate psoriasis, this identical with another study conducted in Iraq, which approximately 50% of patients suffer from moderate psoriasis. Both studies differ from Turkish study that mild psoriasis severity was found in sixty-three percent of patients (24). This difference may be due to exclusion very older patient groups that mostly have a long chronic complicated disease cases in order to obtain a clear responses of treatments. For the treatment options the present study showed 36 patients treated with steroids, 24 patients treated with combination therapy, 13 patients treated with immunosuppressants, and 10 patients treated with biologic agent (figure 2). This is similar with another Iraqi study that said, 63% of patients use topical steroids, 61.7% use etanercept, and 22.7% use methotrexate (25). This dissimilarity is may be due to duration and time difference of study in addition to different patient's number. For the type of treatment in the present study 45% of patients received both topical and systemic therapy (figure 3), which is similar to that reported by a previous study in Iraq, stated that topical steroids represent 63% was most medication used by patients then systemic etanercept represent 61.7%. For the type of steroids, the study found 24 patients received betamethasone while 21 patients received clobetasol (figure 5). This is not identical to the american study used to compare clobetasol and betamethasone for psoriasis patients, where it found that all patients have better response to clobetasol propionate (26).

## Conclusions

The number of psoriasis in the male patient more than in the female, the most affected part of the body is the scalp. Both topical and systemic

treatment is used and mostly steroids were the common used group with betamethasone is the most specific one.

Acknowledgments
The authors express thanks for the support of College of Pharmacy.

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