

## A cross-Sectional Study in Iraq of 145 Patients with Medullary Psoriasis

Dr. Wafa Ismael Ibrahim<sup>1</sup>, Dr. Rana Mohammed Hassan<sup>2</sup>, Dr. Amaal Raad Ahmed<sup>3</sup> and Dr. Ali Qais Abdulkafi<sup>4</sup>

<sup>1</sup>M.B.Ch.B. (Diploma, Dermatology), Iraqi Ministry of Health, Najaf Health Department, Al-Sader Hospital, Najaf, Iraq

<sup>2</sup>M.B.Ch.B., M.F.M. (Family Medicine), Iraqi Ministry of Health, Diwaniyah Health Department, Al Tiqia Primary Health Care, Diwaniyah, Iraq

<sup>3</sup>M.B.Ch.B., M.F.M. (Family medicine), Iraqi Ministry of Health, Diwaniyah Health Department, Al-Askan Al-kadem Primary Health Care, Diwaniyah, Iraq.

<sup>4</sup>M.B.Ch.B., D.C.H. (Pediatrics), Iraqi Ministry of Health, Kirkuk Health Department, Kirkuk Teaching Hospital, Kirkuk, Iraq

**Abstract: Background:** Psoriasis is expressed as a chronic, non-contagious inflammatory skin illness that can disrupt social connections. Patients with psoriasis may experience stigma, which can lead to psychological illnesses such as anxiety and sadness. **Objective:** This paper was aimed to analyse the outcomes of medullary psoriasis for 145 Iraqi patients. **Patients and methods:** This study acquired the databases of psoriasis patients to analyse of a cross-sectional study in Iraq of 145 patients with medullary psoriasis. The databases were analysed and designed by the SPSS program. The study grouped 145 psoriasis patients from different hospitals in Iraq who underwent a cross-sectional analysis. The methodology included two groups, with 70 patients receiving phototherapy and 75 patients using tazarotene cream, respectively. As part of this study conducted between 14<sup>th</sup> May 2021 to 26<sup>th</sup> August 2022, we presented the clinical features and demographic characteristics of medullary psoriasis in people under 40 years of age of all sexes. **Discussion:** In similarity with the last studies, it found (64) 44.1% for BMI of normal weight. Also, our outcomes found that females (74) 51% have had psoriasis more than males (71) 49%. In this study, 10.34% of patients reported psoriatic arthritis, and 15.86% of patients had Dry skin, with more than a quarter of patients having burning 20.69% and Itching with 13.79%; also, Nail affection was the lesser effect of psoriatic arthritis with 11.72%. As well as, our results complications showed that patients by tazarotene cream treatment got 45 of 75 cases while patients by phototherapy treatment had 26 of 70 cases. **Conclusion:** Our study found that phototherapy treatment got less percentage of complications for psoriatic patients in comparison with tazarotene cream. Our study confirmed that phototherapy is the best treatment of psoriasis patients in comparison with tazarotene cream treatment.

**Keywords:** Medullary psoriasis; Tazarotene cream; and Phototherapy.

## INTRODUCTION

Palmoplantar psoriasis is divided into two categories depending on morphology: hyperkeratotic palmoplantar psoriasis along with pustular palmoplantar psoriasis. Also, hyperkeratotic palmoplantar psoriasis is distinguished by well-defined erythematous scaly plaques combined with underlying hyperkeratosis and the absence of sterile pustules on the palms and soles [Mahil, S. K. *et al.*, 2016-Bohm, D. *et al.*, 2013]. Moreover, palmoplantar pustulosis manifests itself as a unilateral eruption involving pin-sized sterile yellow pustules, followed by hyperkeratosis involving erythema, scaling, as well as fissuring. The thenar, hypothenar, and middle portions of the palm are the most prevalent locations. Palmoplantar pustulosis heals with dark pigmentation. [Griffiths, C. E. M. *et al.*, 2007; Farley, E. *et al.*, 2009]

In addition, the HLA Cw6 gene is linked to palmoplantar psoriasis. Variations related to the CARD14 gene, including genes of the IL19 subfamily, may also be linked to palmoplantar pustulosis. Smoking, irritants, friction, and even manual or repeated damage are all environmental causes for palmoplantar psoriasis. Although, the

cause of palmoplantar psoriasis is uncertain. However, the innate immune system of the skin has been linked. Palmoplantar psoriasis causes an increase in the neutrophil-attracting chemokine interleukin (IL-8). Besides to that, patients with palmoplantar psoriasis have more physical discomfort as well as a functional handicap than those with psoriasis in other parts of the body. [Asumalahti, K. *et al.*, 2003-Hallberg, D. *et al.*, 1974]

Persons with palmoplantar disease are substantially more likely than persons with moderate-to-severe plaque psoriasis to suffer from a significant impact on skin-related QoL, struggle with daily activities, as well as rely on topical prescription medicines. These distinctions are crucial for formulating treatment strategies and understanding the treatment of patients' expectations [Kaur, I. *et al.*, 2001-Hengge, U.R. *et al.*, 2006]. The purpose of this study was to examine the results of medullary psoriasis in 145 Iraqi patients.

**PATIENTS AND METHOD**

This study acquired the databases of psoriasis patients to analyse of a cross-sectional study in Iraq of 145 patients with medullary psoriasis. The databases were analysed and designed by the SPSS program. The study grouped 145 psoriasis patients in different hospitals in Iraq who underwent a cross-sectional analysis. The methodology included two groups, with 70 patients receiving phototherapy and 75 patients using tazarotene cream, respectively. As part of this study conducted between 14<sup>th</sup> May 2021 to 26<sup>th</sup> August 2022, we presented the clinical features and demographic characteristics of medullary psoriasis in people under 40 years of age of all sexes. In Table 1 and Table 2, we defined the outcomes, and in Table 3, we presented the BMI categories, which are  $\geq 30$ ,  $< 18.5$ , (18.5–24), and (25–29.9). In this study, we identified the symptoms of medullary psoriasis patients based on symptom identification. These symptoms include dry skin, itching, burning, soreness, periodic rash, pruritis, psoriasis arthritis, and nail affection, and we summarized these outcomes in Figure 1. Figure 2 shows that phototherapy and tazarotene cream are the treatments provided for psoriasis patients. To investigate the outcomes further, we analyzed the

databases for the causes of psoriasis, which include infections, skin injuries, smoking, alcohol consumption, and high blood pressure medications. We have presented these results in Table 4. Furthermore, our outcomes have been examined into the duration of psoriasis, include  $< 30$  and  $> 30$ , where these results can be determined in Table 5. Our results were determined with the site of the joint lesion where exist axial, peripheral, and mixed which. These outcomes can be summarized in Figure 3. In addition, this study was compared between phototherapy and tazarotene cream of postoperative complications for psoriasis patients, which include psoriatic arthritis, blepharitis, obesity, type 2 diabetes, hypertension, cardiovascular disease, celiac disease, and depression where these results can be found in Table 6. Our paper was assessed the severity of the patient's response to treatment based on PASI and combines the severity of lesions with the affected area into a single score ranging from 0 (no disease) until 72 (maximal disease), that can be seen in Table 7.

**RESULTS**

**Table 1:** Clinical features of demographic characteristics with medullary psoriasis based on age

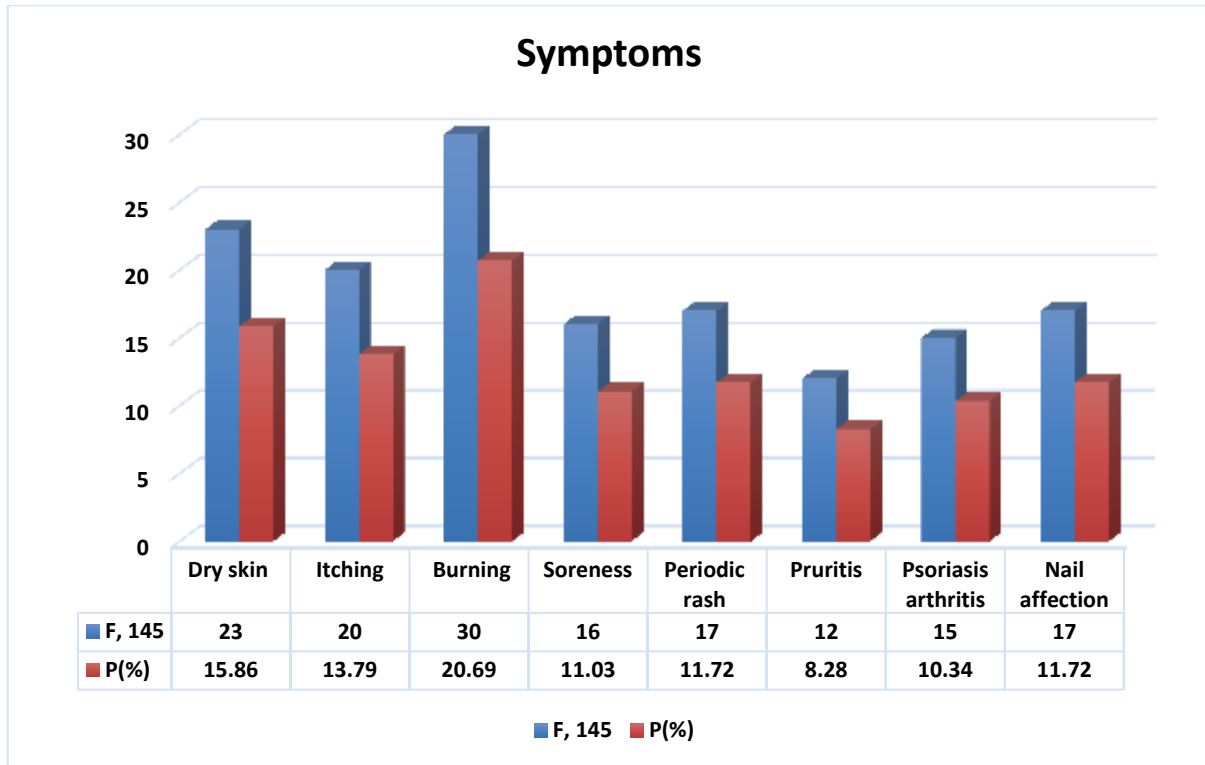
<i>N</i>	<i>V</i>	145
	<i>Mi</i>	0
<i>M</i>		22.3724
<i>SES</i>		.96510
<i>Me</i>		23.0000
<i>Mo</i>		37.00 <sup>a</sup>
<i>SD</i>		11.62131
<i>Var</i>		135.055
<i>Sk</i>		-.209
<i>StdES</i>		.201
<i>Ra</i>		39.00
<i>Min</i>		1.00
<i>Max</i>		40.00
<i>S</i>		3244.00

**Table 2:** Clinical features of demographic characteristics with medullary psoriasis based on sex

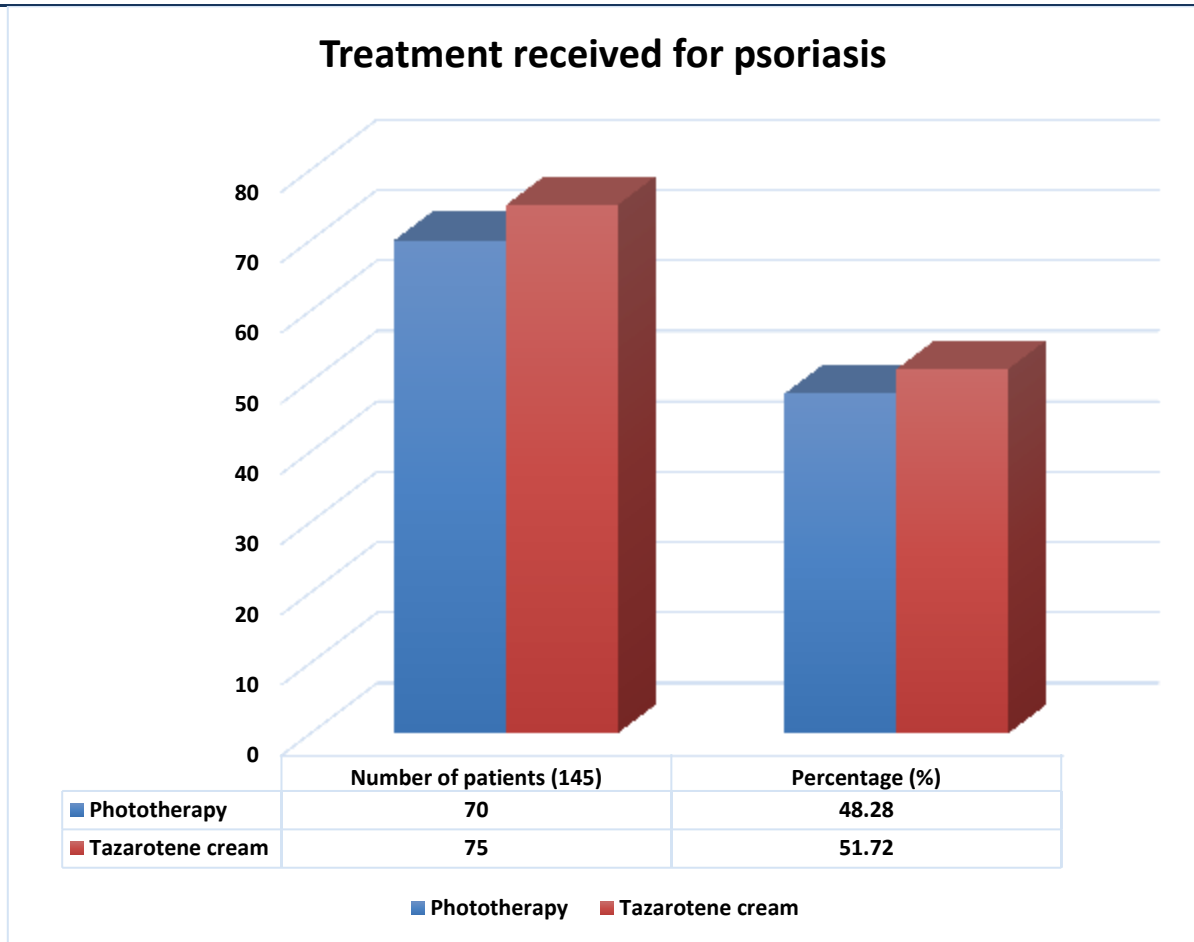
		<i>F, 145</i>	<i>P (%)</i>	<i>VP (%)</i>	<i>CP (%)</i>
<i>V</i>	<i>Female</i>	74	51.0	51.0	51.0
	<i>Male</i>	71	49.0	49.0	100.0
	<i>T</i>	<b>145</b>	<b>100.0</b>	<b>100.0</b>	

**Table 3:** Clinical features of demographic characteristics with medullary psoriasis based on BMI

		<b>F, 145</b>	<b>P (%)</b>	<b>VP (%)</b>	<b>CP (%)</b>
<b>V</b>	<b>≥30</b>	25	17.2	17.2	17.2
	<b>&lt;18.5</b>	16	11.0	11.0	28.3
	<b>18.5–24.9</b>	64	44.1	44.1	72.4
	<b>25–29.9</b>	40	27.6	27.6	100.0
	<b>T</b>	<b>145</b>	<b>100.0</b>	<b>100.0</b>	



**Figure 1:** Identify the symptoms of medullary psoriasis patients.



**Figure 2:** Treatment received for psoriasis patients.

**Table 4:** Causes of psoriasis injuries

Factors	Phototherapy, 70	Tazarotene cream, 75
Infections	22 (31.43%)	25 (33.33%)
Skin injuries	10 (14.29%)	17 (22.67%)
Smoking	18 (25.71%)	11 (14.67%)
Alcohols	11 (15.71%)	8 (10.67%)
High blood pressure medications	9 (12.86%)	14 (18.67%)

**Table 5:** Duration of psoriasis

		F, 145	P (%)	VP (%)	CP (%)
V	<30	94	64.8	64.8	64.8
	>30	51	35.2	35.2	100.0
T		145	100.0	100.0	

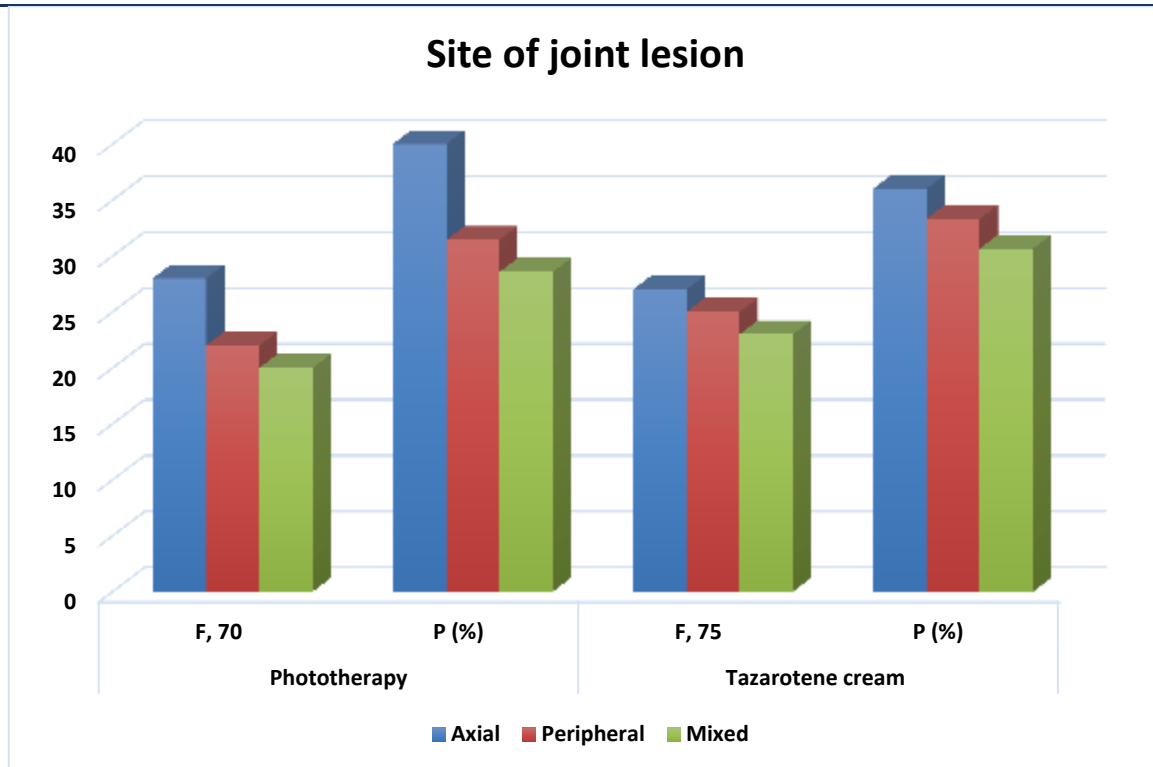


Figure 3: Site of joint lesion.

Table 6: Comparisons between phototherapy and tazarotene cream of postoperative complications for psoriasis patients

Variables	Phototherapy, 70	Tazarotene cream, 75	P-value
Psoriatic arthritis	4 (5.71%)	7 (9.33%)	0.0348
Blepharitis	6 (8.57%)	10 (13.33%)	0.0227
Obesity	3 (4.29%)	4 (5.33%)	0.0463
Type 2 diabetes	3 (4.29%)	4 (5.33%)	0.04841
Hypertension	5 (7.14%)	6 (8%)	0.0491
cardiovascular disease	1 (1.43%)	7 (9.33%)	0.0215
celiac disease	2 (2.86%)	5 (6.67%)	0.0314
Depression	2 (2.86%)	2 (2.67%)	0.04975

Table 7: Assessment of the severity of the patient's response to treatment by PASI score

Factors	Phototherapy, 70	Tazarotene cream, 75	P-value
Site of joint lesion			
Axial	16.44±17.68	50.33±6.95	0.00268
Peripheral	28.74±11.57	45.468±18.44	0.00118
Mixed	15.27±20.28	50.763±7.549	0.00152
Infections	10.643±5.388	37.85±22.68	0.0315
Smoking	13.75±8.885	40.37±11.849	0.00188
Obesity	28.26±18.775	35.468±10.456	0.0335
Hypertension	34.83±16.88	30.68±21.56	0.0422

## DISCUSSION

This study was the onset of conducting with a cross-sectional study in Iraq of 145 patients with medullary psoriasis in comparison between two groups; the first group was phototherapy with 70 cases, while the second was tazarotene cream with 75 cases. We diagnosed the mean age of psoriasis patients under 40 years. Based on the last studies

showed the rate of BMI, who provides a high percentage for normal weight (18.5–24.9). In similarly with the last studies, it found (64) 44.1% for BMI of normal weight. Also, our outcomes found that females (74) 51% have had psoriasis more than males (71) 49%.

Some investigations, including Mohd Affandi, *et al.*, Soliman, as well as Ejaz, *et al.*, revealed a larger percentage of male patients ranging from 56.6% to 76.9%. Similarly, Ding *et al.* found that males had a greater prevalence of psoriasis than females (0.54% vs. 0.44%). Among Malaysia, there existed no gender difference among young patients, but as they became older, male patients outnumbered female patients [Duvic, M. *et al.*, 1997]

Moreover, psoriasis arthritis is arthritis caused by psoriasis, which raises the burden of the disease on the healthcare system, interferes with patients' everyday activities, and lowers their quality of life [Duvic, M. *et al.*, 1998]. In this study, 10.34% of patients reported psoriatic arthritis, and 15.86% of patients had Dry skin, with more than a quarter of patients having burning 20.69% and Itching with 13.79; also, Nail affection was the lesser effect of psoriatic arthritis with 11.72%.

Similarly, to previous studies, more than 60% of psoriasis patients in Iraq experienced impairment of their physical activities and social interactions, and a third had psoriasis negatively affect their sexual activities. Furthermore, as psoriasis severity grew, so did physical activity and psychological sentiments. Furthermore, psoriasis patients reported a worse quality of life than vitiligo and onychomycosis patients, particularly those with lesions in exposed skin regions. In the United States [Binderup, L. *et al.*, 1988], 39% of people living with psoriasis said that their illness was a significant difficulty in their daily lives. Psoriasis has also been linked to decreased job productivity, increased sick leave, and missed workdays. Due to that, we analysed the complications, and joint lesions used PASI scoring, where we found that Psoriatic arthritis, Blepharitis, and Infections were found to be high severity of Psoriatic in the tazarotene cream in comparison with phototherapy. As well as, our results complications showed that patients by tazarotene cream treatment got 45 of 75 cases while patients by phototherapy treatment had 26 of 70 cases. Our study confirmed that phototherapy treatment got less percentage of complications for psoriatic patients in comparison with tazarotene cream.

## CONCLUSION

Phototherapy is a sort of treatment that uses ultraviolet light to treat skin problems. Phototherapy can help to alleviate the symptoms of psoriasis. This drug is appropriate to people of all ages and is frequently used to treat baby jaundice. In our study, phototherapy had a lower rate of

complications for psoriatic patients than tazarotene cream. In compared to tazarotene cream treatment, our study discovered that phototherapy is the most effective treatment for psoriasis sufferers.

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