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Research Paper

Study to assess incidence of Depression and role of stress in patients of Acne and Psoriasis

Medical Science

KEYWORDS : Acne, psoriasis, Stress, Depression

Dr Swati S. Joshi	Associate Professor of psychiatry, MIMER Medical college, Talegaon Dabhade, Pune, Maharashtra
Dr Ashish Ubhale	Assistant Professor of psychiatry, MIMER Medical college, Talegaon Dabhade, Pune, Maharashtra
Dr Rohini P. Gaikwad	Professor of Dermatology, MIMER Medical college, Talegaon Dabhade, Pune, Maharashtra

ABSTRACT

Aim: To know the incidence of depression and role of stress in patients suffering from acne & psoriasis.

Method: It was a cross sectional, single assessment and comparative study between Acne and Psoriasis patients in a tertiary care hospital.

Results: Incidence of depression was not significant statistically between patients of Acne (36.66%) and Psoriasis (26.66%). In the age group above 30years depression was significant ($z = 3.99$, $p< 0.001$) in patients of Acne (75%) as compared to patients of Psoriasis (29.16%). No significant difference was found below the age of 30 years. In female gender incidence of depression was more in Acne patients (52.9%) compared to Psoriasis patients (26.66%). The difference was statistically significant ($z = 2.15$, $p< 0.05$). No significant difference for depression was found in male Acne and Psoriasis patients. No significant difference was found in Acne and Psoriasis patients for Life event score (LE) less than 150 but the difference was significant for Life event score more than 150 ($z = 5.48$, $p<0.001$).

Conclusion: Depression is more common with female acne patient and patients of acne above age of 30yrs. As depression is co-morbidity & stress plays a role in onset or exacerbation of patients of Acne & Psoriasis, psychiatric consultation will be helpful in such cases for better management.

Introduction:

Psychosomatic disorders are a group of physical conditions which either get precipitated or aggravated by psychological factors. When the skin is involved it is known as Psychocutaneous disorder. Skin expresses psychophysiological disturbances very well as it is a contact point between an individual and the world. Brain & skin originates from same germ layer –embryonic ectoderm & are affected by the same hormones & neurotransmitters. Psycho-neuro-immuno-endocrine-cutaneous model was proposed by O'Sullivan et al to explain the mind and body relationship (1). It is observed that in about 30% of skin diseases, stress plays an important role. Stress might act as a precipitating factor in onset or exacerbation of skin disease through psychosomatic mechanisms (2). Stress alters the immune function. In acute condition stress enhances immune function but in chronic condition stress suppresses immune function. Stress modifies inflammation & immunity, thereby affecting the immune mediated dermatological disorders like psoriasis, acne, lichenplanus etc (3). Various factors like biological response to stress, subjective experience towards specific events and environmental factors plays a role in causation and exacerbation of various dermatological disorders.

Psychiatric morbidity is present in about 30% of dermatologic patients. In many cases psychiatric morbidity has no relation with clinical severity of skin disorders. In certain disorders like Acne and Psoriasis, psychiatric co morbidity which can be associated with psychiatric emergencies such as suicide is an important measure of overall disability experienced by patient.(4) The dermatological disorders like acne, psoriasis, atopic dermatitis, urticaria and angioedema have primary dermatopathologic basis but are influenced by psychosocial and psychiatric factors. These conditions are often exacerbated by psychosocial stress and may develop co morbid major psychiatric syndromes such as depression. So identification and treatment of co morbid psychiatric conditions plays an important role for efficient management of such conditions.

Material and Method

The study was designed to find out incidence of depression and to assess the role of stress in patients suffering from acne & psoriasis. This was a cross sectional, single assessment study conducted at a tertiary hospital in Maharashtra.

Patients of Acne and Psoriasis above the age of 15 years attending dermatology OPD who were willing to give informed consent were enrolled in this study. After collection of socio demographic data and detailed dermatological assessment, patients were asked to see a psychiatrist for detailed psychiatric evaluation. ICD 10 criteria (5) were used for assessment of Depression. To know the severity of depression Hamilton Depression Rating Scale (HDRS) (6) was used. Holms & Rahe social readjustment rating scale (7) was used to assess role of stress, in which life events were noted. Life events score less than 150 indicate slight risk of illness, 151 – 299 indicate moderate risk of illness & above 300 high risk of illness.

Patients diagnosed as having psychiatric illness & those not willing to consent for the study were excluded from the study.

Results:

Total 60 patients were enrolled from dermatology OPD of which 30 patients each were suffering from Acne and Psoriasis.

Out of 30patients of Acne 36.66% of patients were having HDRS score more than 7 suggesting depression and out of 30 patients of Psoriasis 26.66% of patients were having HDRS score more than 7 suggesting depression. The difference was not statistically significant.

Table: 1 HDRS score in Acne and Psoriasis patients

	Acne (n = 30)	Psoriasis (n = 30)
HDRS < 7	19	22
HDRS > 7	11	8

In the age group below 30 years 30.76% of acne patients and 16.6% of patients of Psoriasis patients were having Depression. The difference was statistically not significant. In the age group above thirty years 75% of Acne patients and 29.16% of Psoriasis patients were having depression. The difference was statistically significant ($z = 3.99$, $p<0.001$). Mean age of Acne patient was 21.9years and Psoriasis was 44.8years.

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Depression was found in 15.38% of male Acne and 26.66% of male Psoriasis patients. Incidence of depression was little higher in male Psoriasis patients but was not significant statistically. In female gender 52.9% of Acne and 26.66% of Psoriasis patients were having depression. The difference was statistically significant (z = 2.15, p<0.05).

Table 2: Comparison of depression in acne and controls

		Acne (n = 30)		Psoriasis (n = 30)		
		Depressed	Not depressed	Depressed	Not depressed	Z value
Age	< 30 years	8	18	1	5	1.30 NS
	> 30 years	3	1	7	17	3.99,significant P<0.001
Gender	Male	2	11	4	11	-1.08 NS
	Female	9	8	4	11	2.15,significant, p<0.05
Duration of illness	< 3 years	9	17	5	10	0.104848 NS
	> 3 years	2	2	3	12	2.56significant, P<0.05
Life Event Score	< 150	4	17	7	18	-0.82 NS
	> 150	7	2	1	4	5.48,significant p<0.001

In both group of Acne and Psoriasis duration of illness was ranging from few months to several years. There was no statistically significant difference in group having duration of illness less than 3years as 34.61% of Acne and 33.33% of Psoriasis patients were having depression. But patients having duration of illness more than 3years the difference was statistically significant (z =2.56, p<0.05) as 50% of Acne and 20% of Psoriasis patients were having depression. Out of 30 patients, 25 patients (83.3%) of Acne and 18 patients (60%) of Psoriasis were exposed to stressful life events in preceding 1year. Life event score less than 150 was found in 19.04% of depressed Acne and 28% of depressed Psoriasis patients. The difference was not statistically significant. Life event score more than 150 was found in 77.77% of depressed Acne and 20% of depressed psoriasis patients. The difference was significant statistically (z = 5.48, p<0.001).

Discussion:

Incidence of depression was 36.6% in Acne patients & 26% in Psoriasis patients in our study. Earlier studies of Acne by Gupta et al (8), Hughes et al (9) and Yazici et al (10) found the incidence of depression in Acne patients to be 33.3%, 30% and 29.5% respectively which is comparable to findings of our study. Earlier studies by Picardi et al (11), Mattoo et al (12) reported psychiatric morbidity in 45% and 24.27% of the subjects of Psoriasis respectively, which is comparable to the results of our study. A study by Surender Kumar et al (13) reported 90% of psoriasis patients had depression of some grade and Deshpande et al (14) found that 50%-97% of psoriasis patients had depression, which is very high compared to our findings.

In our study significant difference was found in the age group above 30years between patients of depressed acne and depressed psoriasis (z=3.99, p<0.001). Further studies with large sample size are required to confirm our findings and to know the incidence and cause of depression in patients of acne.

Our findings show that 52.9% of female Acne & 26.66% of female Psoriasis patients were suffering from depression, the difference was significant statistically (z = 2.15, P<0.05). This may be because most of the acne patients were of adolescent or early adulthood age group & more conscious about their cosmetic appearance. However further studies are require to confirm our findings, as our sample size was small.

Patients having duration of illness more than 3years, the difference was statistically significant (z =2.56, p<0.05) as 50% of Acne and 20% of Psoriasis patients were having depression. This could be because of variable individual capacity in coping with the disease. Larger sample size is required to confirm this finding.

The life events score was more than 150 in 77.7% of depressed Acne patients indicating stress as a contributing factor. In the study by Goulden et al (15) acne flare due to stress was seen in 71% of patients. Niti Khungar et (16) al reported stress as an aggravating factor in 25.7% of Acne patients, while Kligman AM (17) reported that chronic stress might be a possible cause of increased androgen secretion in some of the women, resulting in the pathogenesis of acne in such patients.

In our study 20% of depressed Psoriasis patients LE score was more than 150 indicating stress as a contributing factor. S K Malhotra et al (18) reported stressful life events in 26% of the patients of psoriasis. Gupta et al reported 39% of psoriasis patients recall a stressful event within 1mth before the onset of psoriasis & 10% were not associated with stressful life events(4). A study by Krueger GG(19) et al reported that Psoriasis is made worse by stress in approximately 30 to40% of the cases.

Conclusion: Depression is more common with female acne patient and patients of acne above age of 30 years. As depression is co-morbidity & stress plays an important role in onset or exacerbation of Acne & Psoriasis, psychiatric consultation will be helpful in such cases for better management.

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