



A Case of Pellagroid Dermatitis in Alcohol Dependent Syndrome Patient

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ABSTRACT:

Pellagroid dermatitis is a skin condition seen more commonly in alcoholics who develop niacin /tryptophan deficiency. In earlier period of late 60s, it was an epidemic disease in world due to nutritional deficiency but now at present time it is secondary to alcohol intake. The incidence of pellagroid dermatitis is hardly 1% in alcoholics. It is characterised by bilateral, symmetrical, non-pruritic, hyperpigmented patch over sun exposed areas of body. Hence, we report this case to consider pellagroid dermatitis as one of the differentials in alcoholics presenting with hyperpigmented skin lesions.

Introduction-

Pellagroid dermatitis, skin lesion due to deficiency of niacin and/or its precursor amino acid tryptophan. Pellagra was epidemic in USA and other parts of world during 1950 but now drastically decreased and seen only as a sporadic case in developing countries⁽⁹⁾. The disease is characterized by the four D's: Dermatitis, Diarrhoea, and Dementia and in some cases Death⁽²⁾. Pellagroid dermatitis is diagnosed clinically due to its pathognomonic and characteristic skin lesions presenting as bilateral symmetrical sunburn, dry, non-pruritic, well demarcated hyperpigmented patch involving photosensitive areas of neck, arm, forearm, hands sometimes feet^(3,4).

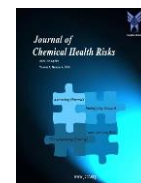
Case report-

A 45-year-old male admitted to JSS hospital medicine ward with complaints of generalised body pain, abdominal discomfort, skin lesions over both hands, tingling sensation and numbness over both hands and foot from 4-5 days. He is a known alcoholic for 3-4 years with increase in alcohol consumption from 1 year of approximately 3 quarters of whisky / day (540 ml). His last drink was 2 days prior to admission. He is not on any chronic medication nor suffering from diabetes mellitus /hypertension/Ischaemic heart disease. On examination, he is a middle-aged male, well built, moderately nourished, oriented to place and person, disorientation to time with presence of fine tremors.

Vitals show pulse rate of 120 bpm, BP- 140/90 mmHg and RR: 17cpm. Local examination revealed bilateral symmetrical dry, cracked, well demarcated, solitary hyperpigmented patch of 10*8 cm in size, irregular in shape with central clearing present over sun exposed area of dorsum of both hands as shown in figure. On systemic examination cardiovascular system, respiratory system, per abdomen and central nervous system were essentially within normal limits. On further investigation haemoglobin :12.4 gm/dl, total count :3000 cells/chum, platelet count:0.74lacs, random blood sugar -110mg/dl, serum sodium: 128mEq/Serum potassium: 2.9 mEq/L, serum creatinine:0.5 mg/dl, liver function test revealed rise in SGOT :471U/L, SGPT: 146U/L, peripheral smear showing macrocytic anaemia with leukopenia (hyper segmented neutrophils) with thrombocytopenia. Here skin lesions seen over both hands were classical and pathognomonic of pellagroid dermatitis. Patient was diagnosed clinically and started on oral Nicotinic acid 250 mg BD, along with supportive treatment. The patient responded to treatment and was eventually discharged.

Discussion-

Pellagra is a chronic multisystem disorder involving skin, nervous system, gastrointestinal tract and recently considered as a multifactorial disease. Pellagroid dermatitis incidence is decreased drastically nowadays. The incidence of pellagroid dermatitis in alcoholics as



per a study conducted in Feb 2019 in a tertiary care Addiction treatment centre in India is 1% (31 out of 2947)⁽⁵⁾.

Pellagroid dermatitis is diagnosed clinically based on its pathognomonic characteristics skin lesion. The skin lesion present with bilateral, symmetrical, dry, sunburn, non-pruritic, well demarcated hyperpigmented patch involving photosensitive areas like neck, arm, forearm, hands and feet. Photosensitive rash appears due to deficiency of urocanic acid, present in stratum corneum of skin which acts as UV-B rays' protector, this is usually deficient in pellagra patients⁽⁴⁾. In initial stage of disease presents with vesicle formation, erythematous and oedematous skin lesions which eventually resolve to form hyperpigmented patch. As per few studies it is observed to have seasonal presentation during late winter/spring season⁽⁷⁾.

Pellagroid dermatitis can be consequence of either primary dietary deficiency of Niacin /tryptophan or secondary to conditions like alcoholics, carcinoid syndrome, drug induced, Hartnups disease, deficiency of Riboflavin/Pyridoxine.

Alcohol inhibits liver tryptophan dioxygenase and pyridoxal phosphate, thereby inhibiting conversion of tryptophan to niacin precursors⁽⁸⁾. It directly destroys duodenum villi, affects absorption of Niacin, Riboflavin, Pyridoxine and other vital nutrients⁽¹⁾. In individuals who consume corn / maize as major diet develop niacin deficiency, as it contains excessive leucine which inhibits conversion of tryptophan to niacin^(6,7). Pellagra cases incidence is decreased drastically worldwide especially in developed countries due to fortification of food products with niacin and decreased consumption of maize. In developing countries like India still sporadic cases of pellagra is reported in alcoholics of lower socioeconomic status⁽⁷⁾.



Figure- hyperpigmented skin lesions without scaling over sun exposed areas of dorsum of both hands.

Conclusion-

In day-to-day clinical practice we come across many Alcohol dependent syndrome patient, but only few

presents with pellagroid dermatitis. As for our newer generation physicians we hardly encounter such case. Even though pellagra is a clinical diagnosis, if missed in initial stage will turn out to be deadly disease eventually leading to death. Early diagnosis and treatment of pellagra has excellent clinical outcome. Hence, we report this case to throw light on pellagroid dermatitis and consider it as differential diagnosis in alcoholics presenting with skin lesion in sun exposed areas and other associated symptoms.

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