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Pellagroid Dermatitis In A Female Chronic Alcohol Dependent Patient: A Case Report

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I. Background Of The Study:

Pellagroid dermatitis is a skin condition caused by a deficiency in niacin and/or its precursor, the amino acid tryptophan or it may occur secondarily due to conditions such as alcoholism, carcinoid syndrome, drug-induced causes, Hartnup disease. The disease is characterized by the four D's: Dermatitis, Diarrhoea, and Dementia and in some cases Death. [1] Pellagroid dermatitis is clinically diagnosed based on its distinctive skin lesions, characterized by bilateral, symmetrical sunburn-like patches. These lesions are dry, non-itchy, well-defined, and hyperpigmented, typically affecting photosensitive areas such as the neck, arms, forearms, hands, and occasionally the feet[2].

II. Case Report:

A 36-year-old married female, was brought to Medicine OPD with generalized weakness, body ache, abdominal discomfort along with non- bloody diarrhea, tingling and numbness upper limb, skin lesion over the hand and back of the neck for last 2 month. Her appetite was reduced and her diet was mainly consist of polished rice. She is a known alcohol user for last 10 years with increase amount since 2 year.

She would consume approximately 750 -1000 ml /day of country made liquor (sulai). Her last alcohol intake was 3 days back. No history of rumfit, black tarry stool and blood in vomitus.

She is not on any chronic medication nor suffering from diabetes mellitus /hypertension/Ischaemic heart disease. On examination, She is a middle-aged Female, ectomorphic built, undernourished. Atrophied tongue papillae with fine tremors were notiched .On mental status examination attention and concentration was not sustained but memory was intact.

Vitals show pulse rate of 104 bpm, BP- 90/60 mmHg and RR: 16cpm.Local examination revealed bilateral symmetrical dry, cracked, well demarcated, hyperpigmented patch of 12× 8 cm in size, irregular in shape with central clearing present over sun exposed area of dorsum of both hands and back of the neck. Systemic examination finding was within normal limit. On further investigation haemoglobin:9.2gm/dl, Random blood sugar: 108mg/dl, Serum sodium: 131mEq, Serum potassium: 2.9 mEq, Serum creatinine: 0.8mg/dl, SGOT: 368U/L, SGPT: 146U/L, Peripheral blood smear: macrocytic anaemia with leukopenia (hyper segmented neutrophils), Niacin level: 0.42mcg/mL.

III. Results:

He was provisionally diagnosed of Alcohol dependence syndrome with pellagroid dermatitis according to DSM-5. The multidisciplinary approach included dermatology, psychiatry, internal medicine, nursing, nutrition, and social assistance. Treatment was commenced with broad-spectrum antibiotics, long acting benzodiazepine, liver supportive. He was prescribed Nicotinamide 250 mg twice daily, vitamin B complex replacement, probiotics, antihistamines, general care for skin lesions with topical antibiotics, and suspension of alcohol intake. After this multidisciplinary approach, the patient showed a significant improvement in symptoms within few weeks.

IV. Discussion:

Pellagra cases have significantly decreased globally, but sporadic cases still occur in lower socioeconomic alcoholics in developing countries like India. 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)[3].

Alcohol inhibits liver tryptophan dioxygenase and pyridoxal phosphate, blocking the conversion of tryptophan into niacin precursors. It also directly destroy duodenal villi, impairing the absorption of niacin, riboflavin, pyridoxine.[4]

People who consume corn or maize as a staple diet may develop niacin deficiency because corn contains high levels of leucine, which blocks the conversion of tryptophan to niacin.[5]

In this case, a female patient with poor socio-economic background and low educational status with chronic alcohol dependence and poor dietary habit was seen. Which imply that vulnerable patient with nutritional deficiency, alcohol may induce pellagroid dermatitis. Women may be more vulnerable because they generally have lower body weight, different fat distribution, and slower alcohol metabolism compared to men, leading to more pronounced nutrient deficiencies. Additionally, this case report underscores the need for healthcare practitioners to understand that medical conditions are intimately intertwined with lifestyle factors.

V. Conclusion:

Pellagra is an acute medical condition commonly associated with alcohol dependence and poverty. It often coexists with serious comorbidities such as delirium tremens and Wernicke's encephalopathy. The classic triad of symptoms is observed in only a small number of cases. Pellagra, though diagnosed clinically, can be fatal if missed initial stage . Timely diagnosis and treatment yield excellent outcomes. We report this case to highlight pellagroid dermatitis and emphasize considering it in alcoholics with skin lesions in sun-exposed areas and related symptoms.

Reference:

[1] Segula D, Banda P, Mulambia C, Kumwenda JJ. Case Report--A Forgotten Dermatological Disease. Malawi Med J. 2012 Mar;24(1):19-20. PMID: 23638264; PMCID: PMC3588195.

[2] Pinheiro H, Matos Bela M, Leal AF, Nogueira L, Mesquita M. Hidden Hunger: A Pellagra Case Report. Cureus. 2021 Apr 25;13(4):E14682. Doi: 10.7759/Cureus.14682. PMID: 34055527; PMCID: PMC8152714.

[3] Narasimha VL, Ganesh S, Reddy S, Shukla L, Mukherjee D, Kandasamy A, Chand PK, Benegal V, Murthy P. Pellagra And Alcohol Dependence Syndrome: Findings From A Tertiary Care Addiction Treatment Centre In India. Alcohol Alcohol. 2019 Mar 1;54(2):148-151. Doi: 10.1093/Alcalc/Agz004. PMID: 30721993.

[4] Brahmaiah U, Parveda AR, Hemalatha R, Laxmaiah A. Pellagra: A Forgotten Entity. Clinical Dermatology Review. 2019 Jul 1;3(2):126.

[5] Harsha NS, Suraj BM, Kanakavidu SS, Kodali R. Pellagra: A Forgotten Ailment In Current Clinical Practice. Medical Journal Of Dr. DY Patil Vidyapeeth. 2019 Jan 1;12(1):78.