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Management of Bullous Pemphigoid with Diabetes Mellitus Type 2

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Abstract

It's an uncommon autoimmune disease that affects both men and women, albeit women have a higher prevalence. Present complaints and investigation: For six months, a woman in her 65th year patient has delivered a presentation dermatology department with the major complaint of fluid-filled sores all over her body. She had also been complaining of lesions with mild to severe scratching, irritation, and an occasional burning feeling over lesions for the past 6 months, and she was a recognised case of type 2 diabetes mellitus for which she had been taking medication for the past 6 to 7 years. The main Diagnosis, therapeutic intervention and outcomes after a physical examination and inquiry, the doctor discovered a case of Bullous Phemphoid with a verified case of DM type 2. Inj. Insulin Mixtard 22U/16U, Tab. Defcort 12 Mg 2-1, Tab. Glicazide 80 Mg BD, Tab. Nicoglow 250 Mg OD, Tab. Cyclophosphamide BD (50 Mg -25 Mg), Cap. Doxepin 10 Mg BD, Tab. Dailyshine 60000IU (Once A Week), L/A Omate - F OD Supplements of vitamin B, calcium, iron, and folic acid were provided. All of the treatments were completed, and the outcome was satisfactory. Conclusion she responded to both medicine and physician counseling. Her itching has diminished and some lesions have healed.

Keywords: Autoimmune disease; Bullous Pemphigoid; Diabetes Mellitus Type 2; Management

Introduction

The most frequent blistering condition is bullous pemphigoid (BP)1. BP is a dermatological autoimmune blistering disorder marked bullae that are tense can appear on either Skin that is normal or erythematous [1,2, 3]. It consists of circulating and tissue-bound autoantibodies directed against a specific antigen bullous pemphigoid antigen1 or bullous pemphigoid antigen or both. Diabetes mellitus without preceding corticosteroid use has been identified with BP and, as observed in a case control report, can predispose to DM, however there is no a connection to a particular type 2 Increased skin fragility due by Hyperglycaemia and the production of autoantibodies produced by glycosylation of dermal proteins are the mechanisms at work. It is possible to argue that Type 1 diabetes is a hereditary disorder. Type 2 diabetes is more likely in this patient. The use of DPP IV inhibitors like as vildagliptin and sitagliptin has been related to an increased risk of BP group [4-6].

Background

The most prevalent kind of sub epidermal autoimmune bullous illness is bullous pemphigoid. The condition affects the elderly, particularly those over the age of 70. In diverse populations around the world, the annual incidence of BP has been estimated to range between 2.4 and 21.7 new cases per million populations. In people over the age of 80, it rises exponentially to 190 to 312 cases per million [7,8]. With an annual frequency of 0.2 to three cases per 100,000 people, BP is the most prevalent of the blistering illnesses. The disease has no gender preference, but it is more common in people over the age of 75. Young adults and children are also susceptible, although only infrequently. In people under the age of 50, BP is uncommon, with a reported prevalence of less than 0.5 cases per million population [9,10].

Patient information: A case of 65-year-old female admitted to AVBRH hospital in dermatology ward on date 23/06/2021 with the Fluid-filled Lesion arm, trunk, back, face for 6 months with mild to moderate itching, and discomfort, burning sensation on arm, trunk, back, face for 8 months. Now she came AVBRH for further treatment of Bullous Pemphigoid. Primary concern and symptoms: When a fluid-filled pea-sized lesion appeared on her arm, she was concerned. she was apparently alright 8 months back. It was insidious in onset and progresses progressively. It was mild to moderate scratching and occasional burning feeling. Later the lesion continued to grow in size and spread to the other arm, trunk and back. Then the lesion began to increase again over 5-6 months in size and number associated with mild and moderate itching. She was admitted to a private hospital after a few days when she took treatment for that. Then she came to AVBRH hospital on 23/06/2021 for farther management of Bullous pemphigoid.

Medical, family and psychosocial history: She was admitted 2 month before in private hospital for same and treatment was taken in the form of oral medication and cream (Cap. Cefixime BD, Cap. Phagolac BD,Tab. Lupipan SR BD ,Tab. Bypride TDS, L/A Fusee B Cream TDS , Tab. Omnacortil 10mg BD For 5 Day ,Cycloxan 100 Mg OD For 5 Day), but got only temporary relief and she was known case of Diabetes Mellitus type 2 from 8 to 10 year & on medication (detail was not available).she took treatment for that. She maintains good interpersonal relationships between the family members and there was no history of diabetes, hypertension, asthma, cancer, liver illness, kidney disease, or autoimmune disease in the family. The patient appears to be worried as well as depressed. Her bowel and urine habits are normal; her sleeping pattern is disrupted owing to itching; and she does not have any harmful habits, such as chewing cigarettes.

Physical examination and clinical finding: On physical examination, the patient is alert, cooperative, and aware of time,

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place, and people. She was in agony, worry, anxiety, and was terribly ill-looking, pale, cyanosed, dehydrated, and afebrile, with all vital parameters normal and a slim body built. Her body mass index (BMI) was 20.5kg/m2, and she weighed 43kg and stood 1.45m tall. Her neurological, chest, and abdominal examinations revealed no abnormalities. Multiple fluid-filled vesicles and bullae on erythmatous base, multiple row region over B/L, UL, B/L, LL, Trunk and Back, Face with extreme itching Bullae had a tight demeanour. BSA is around 30%, the bulla spread sign is positive, and the nikolsky sign is negative.

Timeline: Eight months ago, she appeared to be fine. When a fluid-filled pea-sized sore appeared on her arm .it was insidious in onset and progresses gradually .it was mild to moderated itching and intermittent burning sensation. Later the lesion started increasing in size and spread all over to the other arm, trunk and back. Then patient went to private doctor and took the treatment in the form of oral and local applications but got only temporary relief.

Then lesion again started increasing size and number associated with mild and moderate itching over 5-6 months. Then, again the patient took the treatment in the form of oral and local applications but got only temporary relief.

After few days she got admitted in private hospital when she took treatment in the form of oral and local applications, but got only temporary relief. Then she came to AVBRH hospital on 08/01/2021 for farther management.

Diagnostic assessment

On the basis of patient history, physical and cutaneous examination, Blood investigations was also done hemoglobin 10.8gm, WBC Count 13100cu.mm is increased, RBS- glucose plasma random 446mg% is Increased, Post Meal Blood Sugar is 216MG%, FBS is 178 MG%, total protein is 5.5g/DL is Decreased , albumin 2.7g/DL is Decreased , hb A1C 10.17 A1C NGSPis increased, lipid profile VLDL is 18 mg/dl is Decreased, LDL is 69 mg/dl is Decreased , Kidney Function Test –15 milligrammes per deciliter of urea, 0.5 milligrammes per deciliter of creatinine Potassium is 3.5mmol/L, Sodium is 134mmol/L, urine exam. (Routing) urin albumin is nil, pus cell & epithelial cell is 1-2 cells/hpf, sugar 2++, urine ketone negative, Hepatitis B surface antigen were also negative. Fundus examination was done by the ophthalmologist moderate to severe non proliferative diabetic retinopathy in both eye, skin biopsy from hand is done and report is received very tiny brownish Section from supplied tissue piece exhibits histological traits suggestive of Bullous pemphigoid, and USG per abdominal report shows no evident abnormality in present scan.

Diagnostic challenging: No any challenging during diagnostic evaluation.

Diagnosis: After physical and cutaneous examination and investigation doctor diagnosed a case of Bullous phemphoid with DM type 2.

Prognosis: Bullous pemphigoid usually goes away on its own after a few months, although it can last up to five years. As previously stated treatment can provide symptomatic alleviation of discomfort and itching.

Therapeutic Intervention: Medical management was provided to the patient. The patient's initial treatment consisted of intravenous normal saline to rectify dehydration. Inj. insulin was given to correct hyperglycemia. She also followed the dietician advised. Dietician was advised 2 white eggs daily, 1320 kcal, high fiber and protein, moderate carbohydrate, restricted fat. Strict input and output chart monitoring, RBS charting 2 hourly monitoring TPR charting 6 hourly, blood pressure monitoring of patient. She was taken Inj. Insulin Mixtard 22U/16U, Tab. Defcort 12 Mg 2-1, Tab. Gliclazide Tab 80 mg BD Cyclophosphamide BD (50 Mg -25 Mg) Tab. Nicoglow 250 Mg OD, Tab Lasix BD (20-20), Tab. Neurobion Forte OD, Tab. Shelcal 50 Mg BD, Tab Orofer XT OD, Cap. Doxepin 10 Mg BD, Tab Pan 40 Mg OD, Tab. Dailyshine 60000IU (Once A Week), L/A Saline Soaks BD 30 Min, L/A Omate –F OD , L/A Oilatum BD , L/A Liquid Paraffin OD.

Change in Therapeutic Intervention: she was advised insulin s/s, later was change to Injulin Mixtard 30/70 (18-18 Units), T. metformin SR 500mg and was also advised diabetic panal for a day after which. She was advised insulin Lantus (0-8units) and insulin Mixtard 30/70 (18-18 Units), T. metformin SR 500mg. She was planned for Dexa plain Pulse Therapy infusion for 3 days (1st day , 50 mg dexa in 250 ml of 5% dextrose) post infusion her RBS levels went higher continuously from 6pm even after taking insulin Lantus (glargine) (0-8units)and insulin Mixtard 30/70 (18-18 Units) , T. Metformin SR 500mg. but it was not controlled and then she was shifted to micu for insulin infusion therapy.

Follow-up and Outcomes: Clinical and patient assessment outcomes: symptomatic relief of pain and itching. Patient condition was improved. Health education delivered on She also diet.

Important follow-up diagnostic and other test results: To discourage disease progression and attempt to stop any signs and symptoms that has arisen. After 1 month, doctor recommended follow-up and advised blood investigation, blood sugar level and eye test to know the further progression of the disease.

Intervention adherence and tolerability: patient took all prescribed medications regularly. She also followed the dietician advised. Dietician was advised 2 white eggs daily, 1320 kcal, high fiber, moderate carbohydrate, restricted fat. Her interventional adherence was satisfactory.

Discussion

Pemphigoid is a combination of the Greek words pemphix (bulla, blister) and eidos (healing) (form). With an annual frequency of 0.2 to three cases per 100,000 people, BP is the most prevalent of the blistering illnesses. The disease has no gender preference, but it is more common in people over the age of 75. Young people and children may be impacted as well, but this is far less often [11,12]. Female sex and advanced age are both risk factors for high blood pressure in this patient. Despite not experiencing symptoms, the patient was diagnosed with type 2 diabetes mellitus due to high blood glucose and confirmed with elevated glycated haemoglobin (HbA1c).

Diabetes mellitus has been linked to high blood pressure without the use of corticosteroids, which can predispose to DM, as observed in a case control study, although there hasn't been one. Associations with a particular type Increased skin fragility due to hyperglycemia and the generation of autoantibodies via glycosylation of dermal proteins are the mechanisms at work. Although Type 1 diabetes is thought to be the most closely linked to auto antibodies and autoimmune illness, Type 2 diabetes is more likely in this patient due to her advanced age. The usage of dipeptidyl peptidase IV inhibitors like vidagliptin and sitagliptin has been linked to an increased risk of BP group.

Informed consent: Before taking this case, the patients and their families were informed, and informed agreement was acquired from

both the patients and their family.

Conclusion

BP is an autoimmune blistering dermatologic illness that manifests clinically as tense bullae on normal or erythematous skin. Based on clinical history, physical examination, and skin biopsy, BP with dm type 2 was diagnosed. As previously stated therapy can provide symptomatic relief from pain and itching, as well as the healing of certain blisters.

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