

An unusual cause of abdominal mass in a diabetic patient

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Abstract

Introduction

An estimated 34 million people suffer from Diabetes Mellitus (DM) in the United States. Diabetes management includes lifestyle modifications, oral hypoglycemic agents or subcutaneous insulin injection. The most common reported skin complications with chronic subcutaneous insulin injection are lipoatrophy and lipohypertrophy. In rare cases, patients can develop localized amyloidosis which can result in reduced insulin absorption in the affected site and lead to uncontrolled glucose levels.

Case Report

Here we report a 59 year old Hispanic male with a past medical history of Type II DM who presented with progressively increasing mass for more than a year. The mass started as a small bump at the insulin injection site in the mid-abdominal wall above the umbilicus and enlarged to 11cm in diameter over 5 years.

He denied any associated discomfort, pain or discharge. On physical examination, the mass was hard, mobile, non-tender and without erythema. Labs were unremarkable. CT of the abdomen showed an intermediate density lesion in the subcutaneous tissues of the ventral abdominal wall measuring up to 11 cm in diameter. A core biopsy of the abdominal mass was stained with Congo-red and showed amyloidosis. A bone marrow biopsy ruled out plasma cell disorders and systemic amyloidosis. Liquid chromatography tandem mass spectrometry (LCMS) was performed on the biopsied tissue and was consistent with AIns (insulin) type amyloid deposition.

Final/Working diagnosis

Insulin-derived amyloidosis is a skin related complication that can arise in insulin requiring diabetic patients. A hard subcutaneous amyloidosis mass which is also known as "insulin ball" is formed secondary to repetitive administration of insulin at the same injection site. Patient was instructed to avoid further insulin injections at the site and to limit using only one site for insulin administration.

Learning Objectives

Include localized amyloidosis as one of the differentials for localized subcutaneous mass in insulin dependent diabetic patients