

IMAGES IN CLINICAL MEDICINE

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Insulin-Mediated Lipohypertrophy



A 76-YEAR-OLD MAN WITH HYPERTENSION, CHRONIC KIDNEY DISEASE, and a 15-year history of type 2 diabetes mellitus was admitted to the hospital with pneumonia. Two painless, rubbery, hyperpigmented masses were noted near the umbilical area. The patient reported that for the preceding 10 years he had injected insulin detemir at those sites twice daily (50 units every morning and 25 units every evening). The masses first developed 5 or 6 years before presentation and gradually became more prominent. A clinical diagnosis of insulin-mediated lipohypertrophy was made. Insulin-induced lipohypertrophy occurs at the injection site and is thought to be the result of repeated trauma and possibly the anabolic side effects of insulin. The condition can lead to labile control of blood glucose levels owing to variable insulin absorption at these sites. Lipohypertrophy typically causes such palpable, rubbery growths, although the hyperpigmentation seen in this patient is less typical. Strategies that are used to reduce the risk of lipohypertrophy include rotation of the site of insulin administration and the use of finer needles. The patient was discharged after treatment for pneumonia and was not seen at this medical center for further follow-up.

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