Spontaneous rupture of relatively small sized nonfunctioning ACC: A Case Study

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Introduction: Spontaneous rupture of primary adrenocortical carcinoma is rare and usually fatal if unrecognized. We suggest the case of a 62-year-old female patient with spontaneous rupture of a nonfunctioning primary adrenocortical carcinoma. To our knowledge, this is the second reported case in Korea. **Case Report:** A 62-year-old female was admitted in the emergency room department with left side abdominalpain for 3 days. Upon arrival the patient had a BP of 140/80 mmHg, 80 pulses/min and a body temperature of 36.8 degrees Celsius,respectively. On examination, marked tenderness was presented in left upper abdominal quadrant and no palpable mass. Patient hadno history of diabetes mellitus, hypertension, tuberculosis or any other major systemic illness. Her haematological and biochemical investigations were within normal limits. Under these circumstance,an emergency computed tomography scan of the abdomen with contrast was conducted. And a 4 × 3 × 3 cm sized adrenal mass surrounded by retroperitoneal hematoma was observed. Her vital sign was stable and abdominal pain also subside. Furthermore, aswe know, most common cause of spontaneous rupture with adrenal mass ispheochromocytoma and usually adrenal carcinoma represent larger size than this case. So we decided toconduct electiveoperation.Before operation we did adrenal hormonal study for adrenal mass and the results were within normal limit. Laparoscopic excision of adrenal mass was done after 2days. And the final pathologic diagnosis was adrenal carcinoma. **Discussions:** As adrenocortical carcinoma is uncommon, spontaneous rupture of adrenocortical carcinoma is very rare. Previous reports showed that tumors more than 6 cm in diameter carry an increased risk of malignancy and thus required appropriate management. However our case represent that even relatively small sized adrenal mass with spontaneous rupture, clinicians should consider about malignancy.

Increased risk for development of CAC in insulin-resistant subjects who developed diabetes

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Background: Coronary artery calcification (CAC) is a surrogate marker for atherosclerotic burden. The aim of study was to analyze the risk of incident CAC associated with diabetes development in non-diabetic subjects with zero CAC score (CACS). **Methods:** 2,076 non-diabetic participants in whom CACS were repeatedly measured by computed tomography in four years of intervals and with zero CACS at baseline, were retrospectively analyzed.Glycemic status was assessed, with subjects divided into three groups: subjects with 'no progression', 'normal to impaired fasting glucose (IFG)' and 'progression to diabetes'. Insulin resistance was assessed by HOMA-IR index. **Results:** Over 4 years, 204 subjects developed CAC. Subjects who developed diabetes showed the highest proportion of subjects with incident CAC among the three groups (21.0% vs. 9.3 and 10.4% in non-progressors and subjects from normal to IFG). The subjects with HOMA-IR level in higher half showed significantly increased risk for incident CAC in subjects who progressed from normal to IFG and in subjects who developed diabetes (1.740; 95% CI 1.014-2.985, 2.449; 95% CI 1.159-5.174) even after adjustment for confounding variables, whereas subjects with HOMA-IR level in lower half showed no significant increased risk for incident CAC even in subjects who developed diabetes. **Conclusions:** In this non-diabetic population, we found that increased risk for incident CAC in relation to diabetes development over 4 years was pronounced only in subjects with insulin resistance at baseline.