Journal of Medical Diagnostic Methods
ISSN: 2168-9784
OPEN ACCESS Freely available online
Commentary

Adrenocortical Carcinoma

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COMMENTARY

Adrenocortical carcinoma, also known as Adrenal Cortical Carcinoma (ACC), is a rare disease in which malignant cancer cells form in the adrenal cortex, which is the outer layer of the adrenal glands. There are two adrenal glands (also known as suprarenal gland) and they are found above the kidneys. The outer part of each gland is the adrenal cortex and makes important hormones that help keeps blood pressure normal, balance the water and salt in the body, cause the body to have masculine or feminine characteristics and also help control the body's use of fat, protein and carbohydrates. The inner part is the adrenal medulla and makes the hormones that help the body reacts to stress.

There are two types of adrenal cortical carcinomas i.e. functioning tumors and nonfunctioning tumors. Functioning tumors make more hormones i.e. cortisol, testosterone, and aldosterone than normal. On the other hand, nonfunctioning tumors do not make hormones than normal. Most adrenocortical tumors are functioning. The causes of primary adrenocortical carcinoma are unknown. However, ACC can also be a secondary cancer. A number of risk factors have identified for ACC by scientists. You may be at higher risk for ACC if you have a hereditary disease i.e. Li-Fraumeni Syndrome, Beckwith-Wiedemann Syndrome and Carney Complex that affects the adrenal glands.

Symptoms of ACC include: a lump in the abdomen, a feeling of fullness in the abdomen and pain in the abdomen. In the early stages a nonfunctioning ACC may not cause symptoms. A functioning ACC makes too much of the hormones cortisol, aldosterone, testosterone and estrogen. Too much testosterone and androgens may cause: a deepening of the voice, increased facial and body hair, particularly in females. Too much estrogen may cause: early signs of puberty in children, enlarged breast tissue in males. Too much aldosterone may cause: weight gain, high blood pressure. Too much cortisol may cause: high blood pressure and sugar, muscle weakness in the legs, excessive weight gain in the chest and abdomen and bruising in the body.

The tests and procedures that are used to diagnose ACC depend on the signs and symptoms of the patients. The tests and procedures may be used are: physical exam and history of the patient's health habits and past illnesses and treatments, twenty-four-hour urine test, low-dose dexamethasone suppression test, high-dose dexamethasone suppression test, Computed Tomography (CT) scan or Computerized Axial Tomography (CAT) scan, Magnetic Resonance Imaging (MRI), adrenal angiography, adrenal venography, Positron Emission Tomography (PET) scan and biopsy.

Tumor stages used for ACC are: stage 1 tumors are small i.e. lesser than 5 cm that are still within the tissues, stage 2 tumors are large i.e. greater than 5 cm that are still within the tissues, stage 3 tumors are of any size that have spread to nearby lymph nodes and fatty tissue and stage 4 tumors are of any size that have spread to other organs and tissues. Depending on the stages of cancer, a variety of treatments such as chemotherapy, surgery, radiation, targeted therapy and biological therapy may be used.

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Received: September 25, 2020; **Accepted:** September 25, 2020; **Published:** October 02, 2020

Citation: Chandela P (2020) Adrenocortical Carcinoma. J Med Diagn Meth 9:300. doi: 10.35248/2168-9784.2020.9.300