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Pathology Summit 2018: Clinical Features and Outcomes of Carcinoma of Unknown Primary Site: A single center experience - Suzan. A. Al-Hassanin - Clinical oncology department, Faculty of Medicine, Menoufia University, Shebin Elkom, Egypt.

Suzan. A. Al-Hassanin

Clinical oncology department, Faculty of Medicine, Menoufia University, Shebin Elkom, Egypt.

BACKGROUND: Unknown primitive carcinoma (UPC) is a heterogeneous entity of malignant epithelial tumors. In general, UPC follows aggressive biological and clinical behavior. Information regarding this issue is generally limited. Objectives: To assess the clinical and epidemiological characteristics of patients diagnosed with UPC. Patients and process: All patients classified as taking a UPC who appeared the clinical oncology department of Menoufia University from January 2013 to December 2015 were included in the study. Patient characteristics, investigations and clinical results were collected. In addition, progression time (TTP) and overall survival (OS) were calculated. Results: The study included 103 patients representing approximately 2.2% of the total number of patients who consulted the outpatient clinic of the clinical oncology service during the same period. Most of the patients were men, the average age of the patients was 58, pain was the most common presenting symptom, and adenocarcinoma was the most frequently reported disease subtype. Only 50.5% of patients were able to receive combination platinum chemotherapy. The median TTP remained 2 months then the median OS was 3 months. Age, performance level and presentation symptoms had a statistically significant relationship with TTP. While baseline performance status, presenting symptoms and a pathological subtype had a statistically significant relationship with OS.

Carcinoma is a sort of categories of cancer that mature from epithelial cells. More specifically, a carcinoma is a cancer that begins in a tissue that lines the internal or external surfaces of the body and that originates from cells originating in the endodermal, mesodermic or ectodermal germinal layer during embryogenesis. Carcinomas occur when the DNA of a cell is damaged or altered and the cell begins to grow out of control and become malignant. It comes from the Greek: καρκίνωμα, Romanized: karkinoma, lit. "Evil, ulcer, cancer" (itself derived from Karakinos meaning crab).

Classification:
Since 2004, no simple and complete classification system has been designed and accepted within the scientific community. Traditionally, however, malignant tumors have generally been classified into different types using a combination of criteria, including:

The type of cell from which they leave; More precisely:

• Epithelial cells ⇨ carcinoma

• Non-hematopoietic mesenchymal cells ⇨ sarcoma

• Hematopoietic cells

• Cells derived from the bone marrow that normally mature in the bloodstream ⇨ leukemia

• Cells derived from the bone marrow that normally mature in the lymphatic system ⇨ lymphoma

• Germ cells ⇨ germinoma

Other measures that play a part in a cancer diagnosis include:

• The degree to which malignant cells resemble their normal, unprocessed counterparts

• The appearance of the local fabric and stromal architecture

• The anatomical location from which the tumors originate

• Genetic, epigenetic and molecular characteristics

Histological types

Adenocarcinoma:

(Adeno = gland) Refers to a carcinoma with microscopic tissue cytology linked to architecture, tissue architecture and / or molecular products linked to the gland, for example mucin.

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Squamous cell carcinoma:

Refers to a carcinoma with observable features and characteristics indicating scaly differentiation (intercellular bridges, keratinization and scaly beads).

Aden squamous cell carcinoma:

Refers to a mixed tumor containing both adenocarcinoma and squamous cell carcinoma, in which each of these cell types represents at least 10% of the tumor volume.

Anaplastic carcinoma:

Refers to a heterogeneous group of high-grade carcinomas that present cells lacking histological or cytological evidence distinct from one of the more specifically differentiated neoplasms. These tumors are called anaplastic or undifferentiated carcinomas.

Large cell carcinoma:

Composed of large rounded or openly polygonal monotonic cells with an abundant cytoplasm.

Small cell carcinoma:

The cells are generally round and measure less than about 3 times the diameter of a lymphocyte at rest and with little obvious cytoplasm. Sometimes small cell malignancies can themselves have important components of slightly polygonal and / or spindle cells.

There are a large number of rare subtypes of undifferentiated anaplastic carcinomas. Approximately of the best identified include lesions containing pseudo-sarcoma components: spindle cell carcinoma (containing elongated cells resembling cancers of the connective tissue), giant cell carcinoma (containing huge, bizarre and multinucleated cells) and sarcomatoid carcinoma (spindle mixtures and giant cell carcinoma). Pleomorphic carcinoma contains spindle cell and / or giant cell components, as well as at least 10% of characteristic cellular components of more differentiated types (i.e., adenocarcinoma and / or epidermoid carcinoma). Very seldom, cancers can contain individual mechanisms resembling both carcinoma and true sarcoma, including carcinosarcoma and pulmonary blastoma. The most common cause of large cell carcinoma is a history of smoking.

The period carcinoma also comprises malignant tumors collected of transformed cells whose origin or development line is unknown (see cancer of unknown primary origin; UPC), but which have certain specific molecular, cellular and histological characteristics typical of epithelial cells. This might comprise the construction of one or more forms of cytokeratin or other intermediate filaments, intercellular bridge structures, keratin beads and / or architectural tissue patterns such as lamination or pseudo-lamination.

Invasion and metastasis:

The symbol of a malignant tumor is its propensity to invade and infiltrate local and adjacent structures and ultimately spread from the site of origin to non-adjacent regional and distant sites in the body, a process called metastasis. If left unchecked, tumor growth and metastases ultimately create such a large tumor burden that the host succumbs. Carcinoma metastasizes through the lymph nodes and the blood.

Mutation:

Entire genome sequencing consumes recognized the mutation frequency for whole human genomes. The frequency of mutations in the whole genome between generations for humans (parent to child) is around 70 new mutations per generation. Carcinomas, however, have much higher mutation frequencies. The specific frequency depends on the type of tissue, whether or not DNA repair is insufficient and on exposure to DNA damaging agents such as the components of tobacco smoke. Thon and Amos have abridged the occurrences of mutation by mega base (Mb) in convinced carcinomas, as indicated in the table (as well as the indicated frequencies of mutations by genome).

Diagnostic:

Carcinomas can be finally identified by biopsy, including fine needle aspiration (FNA), central biopsy or subtotal ablation of a solitary node, microscopic examination by a pathologist is then necessary to identify the characteristics molecular, cellular or tissue architectural epithelial cells.

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Conclusion: Carcinomas of unknown primary origin are not rare tumors in the department of clinical oncology of Menoufia University with large varieties of clinical presentations. Baseline performance status with symptoms and a pathological subtype had a statistically significant relationship with OS.

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