Retrospective Analysis of the Prognostic Factors that Influence Treatment Response and Survival of Patients with Cancer of Unknown Primary

Thesis

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Fatma Mohsen

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List of Abbreviations

Abb.	Full term
ADT	*Androgen Deprivation Therapy*
AFP	*Alpha Feto Protein*
AKT	*Protein Kinase B*
ASUH	*Ain Shams University Hospitals*
B-HCG	*Beta Sub Unit of Human Chorionic Gonadotropin*
CA19.9	*Cancer Antigen 19.9*
CBC	*Complete Blood Count*
CEA	*Carcino Embryonic Antigen*
CK7	*Cytokeratin 7*
CTs	*Computerized Topography*
CTZ	*Chemoreceptor Trigger Zone*
CUP	*Cancers of Unknown Primary*
ENE	*Extranodal Extention*
ER	*Oestrogen Receptor*
EUS	*Endoscopic Ultrasound*
GTN	*Gestational Trophoblastic Neoplasia*
ID	*Iron Deficiency*
IHC	*Immunohistochemistry*
KFT	*Kidney Function Tests*
LCA	*Leukocyte Common Antigen*
LDH	*lactate Dehydrogenase*
LFT	*Liver Function Tests*
MAPK	*Mitogen-Activated Protein Kinase*
MDT	*Multidisciplinary Team*
MPMRI	*Multiparametric MRI*
MRI	*Magnetic Resonance Imaging*
NET	*Neuroendocrine Differentiation Tumor*
OS	*Overall Survival*

List of Abbreviations (Cont...)

Abb.	Full term

PFS .....*Progression-Free Survival*
PLAP.....*Placental Alkaline Phosphatase*
PSA .....*Prostate Specific Antigen*
PS……..*Performance Status*
qRT-PCR .....*Quantitative Reverse Transcription Polymerase Chain Reaction*
RECIST .....*Response Evaluation Criteria in Solid Tumors*
SCC.....*Squamous Cell Carcinoma*
TTF-1..... *Thyroid Transcription Factor-1*
VC .....*Vomiting Center*
WHO .....*World Health Organization*

Abstract

Patients' records in the period from January 2012 to December 2017 were reviewed with follow up of treatment response, progression free survival and overall survival Data.

The aim in present study was to retrospectively identify the prognostic factors that influence treatment outcome and survival of patients diagnosed with cancer of unknown primary treated patients to help improving outcome and provide better practice.

In this study, some of the parameters addressed were found to be more or less similar to worldwide incidences with little variations. The median age at diagnosis was 63 years. With slight male predominance 62 (60.8%). The most common histological subtype in biopsied specimens was adenocarcinomas that represents (59.8%).

Keywords: Quantitative Reverse Transcription Polymerase Chain Reaction - Response Evaluation Criteria in Solid Tumors

INTRODUCTION

Cancers of unknown primary (CUP) are heterogeneous group of metastatic tumours for which a standardised diagnostic work-up could not recognize the site of origin at the time of diagnosis. Cancer registries around the world report the incidence of CUP in the range of 3%–5% of all malignancies, worldwide the overall age-standardized incidence per 100.000 people per year is 4–19 cases. CUP therefore ranks among the top 10 commonest malignancies ***(Massard et al., 2011).*** CUP occur equally in both males and females, at average age 60 years old ***(Siegel et al., 2012).*** Incidence of CUP in Egypt is 6.1%in males and 5.5% in females ***(Symons et al., 2012).***

Many Diagnostic approaches should be applied to identify the primary site: history, physical examination, detailed histopathological examination with specific immunohistochemistry, radiological assessment and endoscopies as needed ***(Greco et al., 2013).***

The pathology evaluation of a good quality tissue sample is needed. These tumours are categorised by pathology into: well- and moderately differentiated adenocarcinomas, squamous cell carcinomas, carcinomas with neuroendocrine differentiation, poorly differentiated carcinomas (including poorly differentiated adenocarcinomas), and undifferentiated neoplasms ***(Pentheroudakis et al., 2013).***

Cancer of unknown primary patients are divided into subsets of favourable (20%) and unfavourable (80%) prognosis. Favourable subsets(women with papillary adenocarcinoma of the peritoneal cavity, women with adenocarcinoma involving the axillary lymph nodes, poorly differentiated carcinoma with midline distribution, poorly differentiated neuroendocrine carcinoma, squamous-cell carcinoma involving cervical lymph nodes, adenocarcinoma with a colon-cancer profile (CK20+, CK7–, CDX2+)/men with blastic bone metastases and elevated prostate-specic antigen (adenocarcinoma), isolated inguinal adenopathy (squamous carcinoma), patients with one small, potentially resectable tumors are mostly given locoregional treatment or systemic (platinum-based chemotherapy). Responses and survival are similar to those of patients with relevant known primary tumours ***(Thomassen et al., 2014).***

Patients in unfavourable subsets (adenocarcinoma metastatic to the liver or other organs, non-papillary malignant ascites (adenocarcinoma), multiple cerebral metastases (adenocarcinoma or squamous carcinoma), several lung or pleural metastases (adenocarcinoma)multiple metastatic lytic bone disease(adenocarcinoma), and squamous-cell carcinoma of the abdominopelvic cavity) are treated with empirical chemotherapy based on combination regimens of pltinums, taxanes, but responses and survival are generally poor ***(Pavlidis et al., 2012).***