A comprehensive study of incidence and clinical manifestations among Iraqi patients with newly diagnosed AML in 2022

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Abstract

Background: Leukemias are the primary cause of cancer-related mortality, AML has the lowest survival rate being one of the more prevalent leukemias in adults worldwide as well as in Iraq.

Materials and methods: The descriptive, epidemiological study was conducted on 412 newly diagnosed AML patients as a sample of the Iraqi population enrolled in the Oncology Center in the Medical City of Baghdad province and the Basrah Oncology Center in Basrah province during 2022. Their mean age was 42.09 ± 22.32 years.

Results: Among 412 patients, a median age of 40.05 was the predominant Iraqi AML which was lower than that of other developed countries. The disease was more predominant in age categories (≥ 70) years and (60-69) years with 18.52 % and 16.26% respectively. The majority of the patients were suffering from pallor (65.29%), fever (49.76%), leukocytosis (43.20%) or cytopenia (27.18%) at the time of presentation.

Conclusion: The study indicates that the disease is highly prevalent, with a younger median age than in other nations, and the most prevalent subtype of AML was APL. The clinical and epidemiological features have effects on comprehending incidence and disease development.

Keywords: AML, Leukemia, epidemiological, Iraqi patients, Clinical manifestations.

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Introduction

Acute myeloid leukemia (AML), is a disease with great diversity with numerous genetic abnormalities which affect the disease outcomes. A very high number of new cases of cancer and deaths from the disease occurred globally during 2020 (1). Leukemia causes many incidences, accounting for an estimated 474,519 cases annually (2). According to the American Cancer Society (3), there will be over 24,000 leukemia-related fatalities in the US in 2022 including AML, ALL, CML, CLL3, and Other leukemias. AML offers a serious hazard since it has the lowest survival rate of any leukemia,

while being one of the more prevalent leukemias in adults. Leukemias are the primary cause of cancer-related mortality among people under the age of 39 and in children while having a lower incidence than other types of cancer. Older individuals have the highest frequency of leukemia cases, with age beyond 60, the risk of incidence, particularly of AML, continually increases. Males are more likely than Females as AML patients, but the mean lifetime risk for both sexes is around 0.5%. The genetic composition profile confirms that the frequency of aberrant genes, which may be linked to leukemia cases, varies with age (4). In old age, leukemia patients have been found to have unfavourable cytogenetics, which is related to poor prognosis (5). Leukemia is one cancer type that is expected to appear in an increasing number of reports annually (2). The current study aimed to clarify the incidence of acute myeloid