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The Pattern of Leukaemias among Adults in Jos, North Central Nigeria

Damulak Obadiah Dapus, Egesie OJ, Jatau ED, Ogbenna AA and Adediran AA*

Department of Haematology and Blood Transfusion, Jos University Teaching Hospital (JUTH), Jos, Nigeria

Abstract

Introduction: Leukaemias are haemopoietic malignancies classified into acute and chronic. Each of these two main groups is further divided into lymphoid or myeloid leukaemia depending on the cell of origin. Acute leukaemias are common in childhood while the chronic entities dominate the adult life.

Aim: This study aimed to determine the pattern of leukaemia cases seen in our setting.

Methods: All leukaemia cases seen in the Jos University Teaching Hospital, (JUTH), Jos: North Central Nigeria, from the year 2001 to 2016 were studied. Sociodemographic clinical and laboratory data of the patients were obtained from their case files. Data were analyzed using epi info statistical software.

Results: Two hundred and thirty one (231) adults were diagnosed of leukaemia over the study period, 120 (51.95%) males and 48.05% females, aged 18 and 85 years (mean 44.0 ± 17.2). Distribution leukaemia cases based on patient's age; showed peaks at age 30, 50 70 years. The lowest annual leukaemia capture were the years 2001 and 2010 while the highest rate of diagnosis was in 2014. The chronic and acute were respectively diagnosed in 64.1% and 35.9% of studied subjects. The frequency of individual cases was; CLL (32.5%), CML (31.6%), AML (19.0%) and ALL (16.9%). Acute myeloblastic, lymphoblastic and chronic myelocytic leukaemia showed overall increase with increasing patient's age over twelve years. The rate of diagnosis of chronic lymphocytic leukaemia however tended to decline from a recorded peak in 2013. Leakaemia in adults was highest in the age group 20-40 years, followed by aged 40-60, 60-80, 18-20 years and least in 80-100 years respectively.

Conclusion: Acute leukaemias may be commoner in adults below 40 years while the chronic disorders are commoner in those above 40 years with the age of 30, 50 and 70 years at increased risk.

Keywords: Pattern; Adult; Leukaemia; Nigeria

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Correspondence:
Damulak Obadiah Dapus, Department of Haematology and Blood Transfusion, Jos University Teaching Hospital (JUTH), Jos, Nigeria, Tel: O8035664635;
E-mail: ddamulak@yahoo.com

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Introduction

Leukaemias are a heterogeneous group of haemopoietic stem cell malignancy characterized by clonal proliferation and accumulation of neoplastic haemopoietic cells in the marrow, spillage of the cells into the peripheral circulation and infiltration of organs [1]. The cardinal features of leukaemia are due to neoplastic marrow infiltration, marrow failure, organ infiltration and hypermetabolism [1,2]. Leukaemia affects all age groups without significant gender predilection. Acute leukaemias are found dominantly among children, though a higher proportion of Acute Myeloblastic Leukaemia (AML) are in adults and the elderly, while chronic leukaemias occur mainly in the adult age and the elderly [1,3].

A report from work done in the Niger Delta region of Nigeria between 1997 and 2003 show that Chronic Myelocytic Leukaemia (CML) accounted for 33.3% of adult leukaemias, establishing the relationship between one year survival in CML and Chronic Lymphocytic Leukaemia (CLL) to the total White Blood Cell Count (WBC) [4]. Nwannadi et al. [5] studying the characteristics of patients with leukaemia in the South South Nigeria between 1999 and 2008 found a 52.1% prevalence of the disease among the male sex. They also documented various mean age of occurrence of different types of leukaemia; Acute Lymphoblastic Leukaemia (ALL) at 4.4years, AML at 25.6 years, CML at 35.2 years and CLL at 57.1 years [5]. The symptoms of disease documented in the patients were fever (78.5%), weakness (82.2%), weight lost (54.6%) and bone pains (31.9%). Major clinical signs recorded in their study were pallor, splenomegaly and hepatomegaly [5]. A study from Ilorin, Nigeria, described the pattern of Haematologic Malignancies (HM) seen in the Teaching Hospital,