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High Incidence of Idiopathic Thrombocytopenic Purpura in Jahra Region of Kuwait

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Objective: To study the incidence of ITP in adults in Jahra region.

Design: A retrospective study of all thrombocytopenic patients admitted to adult medical wards of Al Jahra hospital was performed during two years, (2003-2004 inclusive).

Setting: Adult medical wards of Al Jahra hospital, Kuwait.

Result: Out of the total 81 patients with thrombocytopenia, 34 cases (41.2%) were found to be due to ITP. Jahra hospital is the only referral hospital in Jahra region, catering to a population of 280,000 which makes the incidence of 60 per million populations per year. Thirty ITP patients had first line medical treatment, 3 required splenectomy and one responded to second line treatment of Azathioprine.

Conclusion: Incidence of ITP varies significantly in different parts of the world. The incidence in Kuwait is higher than that seen in other parts of the world.

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ITP is an acquired disease, defined as isolated thrombocytopenia with no clinically apparent associated conditions or other causes of thrombocytopenia[1]. It presents as an acute thrombocytopenia which is more common among children, while the chronic ITP (persists >6 months) is more common among the adults. The incidence of ITP as reported in international studies suggest an incidence of 46 new cases per million population in children and 38 new cases per million in adults[2]. While the incidence of ITP in both sexes is reported to be equal among children, a female preponderance is reported in adults[3]. In this study, we tried to find the incidence of ITP in Jahra region and tried to study the incidence of preceding infections and the response to treatment of patients in this study.

METHOD

A study was performed during two years (2003-2004 inclusive) of all thrombocytopenia patients admitted to the adult medical ward of Al Jahra Hospital, Kuwait. Significant thrombocytopenia was defined as platelet count of $<100 \times 10^9$/L for the purpose of this study. All cases of EDTA induced pseudothrombocytopenia were excluded from the study. ITP was diagnosed in the hospital by the strict definition of ITP as described in literature.

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RESULT

The distribution of thrombocytopenia cases in medical wards of Jahra hospital showed a preponderance of ITP cases, see Table 1.

Table 1: Distribution of Thrombocytopenia in Adult Patients in the Medical Wards, of Al-Jahra Hospital for Two Years

Disease	Percentage
ITP	41.2
SLE	9.5
DIC	6.3
HIT	7.9
Chronic liver disease	12.7
Leukemias	6.3
Aplastic Anemias	3.3
Autoimmune hepatitis	1.6
Megaloblastic Anemia	3.3
MDS	1.6
Chronic Renal failure	4.8
Carcinoma Pancreas	1.6

A bone-marrow was performed in all cases suspected of ITP clinically. Anti-platelet antibody study was also performed during 2 years, 34 new cases of ITP were diagnosed in the hospital in adults (an average of 17 per year). The male female ratio showed a marked female preponderance with 22 females and 12 males 1.8:1, see Table 2.

Table 2: Female and Male Distribution of ITP Cases

Sex	Number	Percentage
Female	22	64.7
Male	12	35.3
Total	34	100

Jahra hospital is the only referral admitting hospital in Jahra region of Kuwait catering to a population of 280,000, which makes the incidence of ITP 60 per million per year. Even if a few cases get admitted to private hospitals, it would only further increases the incidence in the region. Age distribution was from 12 to 40 years, only one patient was 70 years old. The majority of ITP recovered with the conventional IV Immunoglobulin or oral steroids over a period of 6-8 months. Only 3 patients required splenectomy and one patient was given Azathioprine after he has become steroid dependant ITP. He had complete recovery after 6-8 months of Azathioprine therapy. The number of patients who gave definite history of viral infections preceding ITPs was very few. Antiplatelet antibodies were studied in 30 out of the 34 patients and were positive in 26 cases.

DISCUSSION

Idiopathic thrombocytopenic purpura (ITP), also known as primary immune thrombocytopenic purpura, it is defined as isolated thrombocytopenia with normal bone-marrow and the absence of other causes of thrombocytopenia. It presents as two distinct clinical syndromes – an acute

condition in children and a chronic condition in adults. Little is known about the influence of environment and ethnic factors on the epidemiology of ITP. Nevertheless, a number of children with acute ITP give a history of viral upper respiratory tract infection or an immunization in the weeks preceding the onset of purpura[4,5]. Such history is less forthcoming in the adult chronic ITP patients. The incidence of ITP as reported, in the studies was approximately 46 new cases per million per year in children and 38 per million per year in adults. The incidence of ITP in adults in Jahra region is approximately 60 per million per year according to this study. This is higher than most of the studies from the western countries, but still not as high as 125 per million per year in children as reported earlier from Kuwait, our study is in adults only[6]. The female to male ratio in this study confirms the female preponderance shown in adult ITP in most studies. The age incidence in this study is comparable to other studies. In this study, a case of ITP in 70 year old patient was seen. A study by Kuhn et al about the influence of ethnicity and environment supports its influence on the phenotype of ITP but concludes by suggesting the need for further epidemiological studies[7]. A definitive history of preceding viral infection was obtained in very few of our patients.

We followed the practiced guidelines for the American Society of hematology for ITP in treating our patients. Patients with platelet count $<30x10^9$/L with significant purpura or bleeding were given IV immunoglobulins or steroid therapy. The Majority of patients responded after 6 to 8 months with steady asymptomatic ITP off steroids therapy, although platelet count did not necessarily go above $100x10^9$/L. Three of the patients did not respond and had undergone splenectomy while one male patient responded after a prolonged treatment with Azathioprime[8,9].

CONCLUSION

Although ITP is a very common hematological condition worldwide, there is significant variation in incidence in different parts of the world, reports from Kuwait show a higher incidence; the present study confirms that finding. Whether ethnic or environmental factors play a role in the phenotype of this disease needs further epidemiological studies.

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