Salwa Akl

بسم اللّه الرحمن الرحيم

مركز الشبكات وتكنولوجيا المعلومات

قسم التوثيق الإلكتروني

Salwa Akl

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم باللّه العظيم أن المادة التي تم توثيقها وتسجيلها

علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

Salwa Akl

بعض الوثائق الأصلية تالفة
وبالرسالة صفحات لم ترد بالأصل

The State of Nursing Care of Thalassemic Patients and the Design, Implementation and Evaluation Of a Program to Upgrade Nursing Care For Thalassemic Patients

Thesis

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By

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To my Brother:

BAKR

To my Husband:

Dr. Yasser

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Asmaa Abdel Aziz Mohamed

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INTRODUCTION AND AIM OF WORK

The term *'thalassemia'* which is derived from a Greek word meaning *'sea'* is applied to a variety of inherited blood disorders characterized by deficiencies in the rate of production of specific globin chains in hemoglobin. The same refers to those people living near the Mediterranean Sea who have the highest incidence of the disease namely Italians Greeks and Syrians (Wong and Whaley, 1990) and also some other areas of the world including Southeast Asia (Chern and Chen, 2000).

Beta-thalassemia is the most common form of the thalassemia and occurs in three forms; a heterogeneous form, thalassemia minors on thalassemia trait which produces a mild microcytic anemia, thalassemia intermedia which is manifested as splenomegaly and severe anemia; and a homozygous from thalassemia major also known as Cooley's anemia (Kutlar et al., 1990).

In Egypt, beta thalassemia major is the commonest chronic hemolytic anemia. It constitutes a major and distressing public health problem. Beta-thalassemia constitutes 39% of total hematological patients and 84% of those with chronic hemolytic anemia in Hematology Oncology Clinic, Children's Hospital of Ain Shams University (Allam, 1993). Records of Assiut University Hospital indicate that as many as 650 ß-thalassemic patients were followed up since 1989. Their age ranged from 6 months to 18 years.

The genetic alterations that produce the beta thalassemia syndromes are many. Mutations of the ß-globin include deletions and mutation of frame shifts that prevent any mRNA production, and mutations affecting promoter or splice sites which permit reduced levels of mRNA and hence affecting hemoglobin synthesis (Champlin et al., 1985).

Patients with ß-thalassemia major are particularly susceptible to infections. Several factors have been incriminated as a cause for this high frequency and severity of infection. Anemia, iron overload, splenectomy, the use of chelating agent and repeated antigenic stimulation by transfused foreign proteins or oncogenes and immunosuppressive viruses have been held responsible for the reduced body resistance to infection (Behrman, 1996).

Studies concerning the immune status in ß-thalassemia revealed definite changes in some aspects of humoral and cellular immunity. These might include quantitative alteration in the distribution of peripheral blood lymphocyte sub-population as well as functional alteration in natural killer cytotoxicity ß cell differentiation and T-cell immunoregulation (Allam, 1993).

The pediatric nurse is a team member working with a variety of professions to the welfare of the child and his family in maintaining the integrity of each family in offering guidance in preventing illness and in providing skilled nursing care for children when they are well and when they are ill (Allam, 1993).

Dyson et al. (1993a) emphasized the potential role that should be played by nurses in supporting thalassemic children and their families. So, the present study has been carried out to verify the knowledge and skills of pediatric nurses caring for thalassemic children in Assiut University Hospital. This is a preliminary step that will be followed by preparing an educational and training program to fix and improve any shortage or deficiency that might be identified through the baseline assessment.

AIM OF WORK:

(1) To assess the present knowledge and practice of nurses caring for thalassemic patients.

(2) To develop an inservice training program for nurses giving care to thalassemic patients.

(3) To evaluate the program through its effect on knowledge of nurses and the quality of care provided to thalassemic children.

Review of Literature

PART I: THALASSEMIA

Physiologic Overview

The hematologic system consists of the blood and the sites where blood is produced including the bone marrow and lymph nodes. The blood consists of cellular components suspended in blood plasma (white blood cells, normally 5,000 to 10,000 per mm^3 of blood). There are approximately 500 to 1000 erythrocytes for each leukocyte. The leukocytes exist in several forms; eosinophils, basophils, monocytes, neutrophils and lymphocytes. Platelets (normally 150,000 to 450,000 platelets per mm^3 of blood). These cellular components of blood normally make up 40% to 45% of the blood volume. The fraction of the blood occupation by erythrocytes is called hematocrit. Blood appears as thick opaque red fluid. Its color is imparted by the hemoglobin. The volume of blood in humans is approximately 7% to 10% of the normal body weight and amounts to about 5 liters (Hutman, 1992).

Anemias

A frequent disorder of the hematologic system is a decrease in the number of the circulating red blood cells. This condition called anemia. Physiologically, anemia exists when there is an insufficient amount of hemoglobin to deliver oxygen to the tissues (Meyer, 1994).

Pathophysiology

The appearance of anemia reflects either marrow failure (reduced erythropoiesis) or excessive red cells loss or both. Marrow failure may occur as a result of nutritional deficiency, toxic exposure, tumor invasion or from unknown causes. The anemia in a particular patient is caused by destruction of red blood cells usually can be reached on the basis of:

1. Reticulocytes count in the circulating blood.
2. Degree to which young red cells proliferates in the bone marrow.
3. Presence or absence of hyperbilirubinemia and hemoglobinemia (York and Jones, 1995).

Several factors affect the severity and presence of symptoms:

1. The speed with which the anemia has developed.
2. It is duration.
3. The metabolic requirements.
4. The presence of other disorders.
5. Special complications (York and Jones, 1995).

Nursing Diagnosis:

Based on the assessment data, major nursing diagnosis for the patient may include the following:

-Activity intolerance related to weakness, tachypnea, dyspnea on exertion, fatigue and general malaise.

-Altered nutrition less than body requirements related to inadequate intake of essential nutrients (York and Jones, 1995).

Potential Complications:

1. Congestive heart failure.
2.Parasthesias.
3. Confusion (Armstrong et al., 1995).

Classification (Armstrong et al., 1995):

The deficiency in red cells is due to:

1. A defect in production of red cells (hypoproliferative) anemia.
2. Destruction of the red cells (hemolytic anemia).

Hypoproliferative Anemia (Armstrong et al., 1995)

(1) Aplastic Anemia:

Pathophysiolgy: Aplastic anemia is caused by a decrease in precursor cells in the bone marrow and replacement of the marrow with fat. It can be congenital or acquired.

Causes:

1. Congenital
2. Infections.
3. Medications.
4. Chemicals.
5. Radiation damage.