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Adult Sicklers' Description of Sickle Cell Crisis Manifestation and Preventive Measures

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ABSTRACT

Sickle cell disease is an inherited blood disorder characterized by defective haemoglobin. It manifest by episodes of crisis which is a menance to the patients and their families. The purpose of the study is to assess the self-description of sickles cell crisis and frightening factors by the adult sicklers. A descriptive survey design was adopted for the study. 232 adult sickle cell patients who attend sickle cell clinic at UNTH and Enugu State University Teaching Hospital Parklane, Enugu from July to Dec 2013 were used for the study. The data were collected using questionnaire constructed by the researchers. A splite –half method was use to find the reliability of co-relation co-efficient of 0.81. The findings show that 126 (54.3) reported pain in the chest and stomach, 224 (96.6%) reported pains in bones of the legs, arms and hips, 85(36.6%) reported headache while 150 (64.5%) described not drinking enough water as triggering factor to sickle cell crisis and 144 (62.1%) described malaria as a triggering factor to the crisis. It is recommended that care givers should put into consideration these symptoms and trigger factors identified by adult sickle cell patient while caring for them.

Keywords: Sickle Cell Crisis, Adult Sicklers, Triggering Factor

I. INTRODUCTION

Sickle cell disease is an inherited blood disorder characterized by defective haemoglobin (Papadaskis, Hadji and Loukopoulos 2006). It is a widely distributed and affects millions of people throughout the world and is particularly common among those whose ancestors come from sub-sahara Africa, South America, Caribbean as well as Mediterranean Countries (WHO 2006). Nigeria has the highest number of sufferers of sickle cell disease in the world and account for 150,000 out of 200,000 of the sufferers per year in Africa (WHO 2006, News Agency of Nigeria 2011).

The abnormal haemoglobin for sickle like shape making the red blood cells stiff and sticking and tend to form clumps in the blood vessels which abstract blood flow in the artivoles and venols. This result in episodes of crisis Ibe et al, 2009). This crisis is the hallmark of sickle cell disease. The pains during the crisis is probably due to tissue ischaemia and infaction. Many works have been done to describe the symptoms of this disease. Kato et al (2009) describe the pains as burning, lancimating or tingling while Ibe (2009) described it as episodic and acute. Brunner and Smeltzer (2010) described the symptoms to include pain in the joint, chronic ulcers especially above the ankle, fever, kidney failure, haeafuria, dehydration, anaemia, increased bilirubin in the blood and swelling and infarct of organs like spleen, liver and the heart. Researcher have try to identity different factors that precipitate crisis in a sickle cell patient. Al-arranged (2007) attributed the crisis to extreme weather condition, Oniyongi and Omari (2009) highlighted malaria as one of the triggering factor, Dihy ET l (2009) associated the crisis with poor diet, and other infections.

The work aimed as identify the manifested of the sickle cell crisis and the precipitating factors as described by adult sickle cell patients attending sickle cell clinic at UNTH and ESUTH Parklane Enugu.

II. METHODS AND MATERIAL

A descriptive survey research design was used. The research setting was at UNTH Ituku-Ozalla and ESUTH Parklane Enugu from July 2013-Dec 2013. 232 patients who were willing to participate, above 18 years and were present on the clinic day-were used for the study. The instrument of the study was questionnaire constructed by the researcher split-half was used and Cronbachi's Alpha used to test the reliability with co-relation coefficient of 0.81. Discriptive statistics was used to analyse the data.

Ethical clearance was obtained from the two hospitals before the data were collected and informed oral concerned were obtained from the respondents before the administration of the questionnaire.

III. RESULT AND DISCUSSION

Table 1: Description of the manifestation of sickle cell crisis by adult sicklers

	Yes	**No**	**Total**
Pain in the chest and stomach	126(54.3%)	106(45.7%)	232(1100%)
Pains in bones of legs, arms and hips	224(96.6%)	8(3.5%)	232(100%)
Headache	85(36.6%)	147(63.9%)	232(100%)
Pains in the joints	107(36.6%)	80(34.5%)	232(100%)
Chills	16(6.9%)	216(93.1%)	232(100%)
Fever	75(32.3%)	157(67.7%)	232(100%)
Vomiting	8(3.4%)	224(99.6%)	232(100%)
Bleeding	0(0%)	232(100%)	232(100%)

Table 1 Showed the description of sickle cell crisis by adult sicklers. The result show 126(54.3%) answered that sickle cell crisis manifests as sharp pain in the chest and stomach while 106(45.7%) did not agree with that as sickle cell crisis manifestation. 224(96.6%) reported that sharp pains in the bones of leg and arms is manifestation; 85(36.6%) answered yes to headache as a manifestation, 147(63.4%) answered no, 107(46.1%) answered yes to pain in the joint as a manifestation of sickle cell crisis, 80(34.5%) answered no to pains in the join as manifestation; 16(6.9%) answered yes to chills as a manifestation, 216(93.1%) answered no. To chills being a manifestation 75(32.3%) answered yes to fever as a manifestation, 157(67.7%) answered no to it. 8(3.4%) answered yes to vomiting as a manifestation, 224(99.6%) answered no. None answered yes to bleeding as a manifestation of sickle cell crisis.

Table 2: Description of the triggering factors if sickle cell crisis by adult sicklers

Factor	**Yes**	**No**	**Total**
Not drinking enough water	150(64.5%)	87(35.5%)	232(100%)
Malaria	144(62.1%)	88(35.5%)	232(100%)
Other infection e.g pneumonia, meningitis, hepatis	11(4.7%)	221.(95.3%)	232(100%)
Exposure to hot weather	40(17.2%)	19282.8%)	232(100%)
Emotional stress	75(33.6%)	15467.4%)	232(100%)
Climbing a hill	16(7.0%)	216(93%)	232(100%)
Working for a longtime	16(6.9%)	216(93.1%)	232(100%)
Not eating balanced diet	24(10.3%)	208(89.7%)	232(100%)
Eating fatty food	0(0%)	232(100%)	232(100%)
Eating beans	0(0%)	232(100%)	232(100%)
Evil men	16(6.9%)	216(93.1%)	232(100%)
Tea	0(0%)	232(100%)	232(100%)

Table 3: Description of preventive measures for sickle cell crisis by adult sicklers

Measures	Yes(%)	No(%)	Total (%)
Balance diet	77(33.2 %)	158(66.8%)	232(100%)
Drinking enough water	174(75. 0%)	58(25%)	232(100%)
Preventing malaria	149(64. 2%)	83(35.8%)	232(100%)
Preventing other infection like hepatitis, meningitis, pneumonia	43(18.5 %)	189(81.5%)	232(100%)
Having adequate rest	33(14.2 %)	199(85.8%)	232(100%)
Moderate exercise	16(6.9%)	216(93.1%)	232(100%)
Avoiding fatty food	8(3.4%)	224(96.6%)	232(100%)
Avoiding extremes of weather conditions	59(25.4 %)	173(74.6%)	232(100%)
Managing stress well	62(26.7 %)	170(73.3%)	232(100%)

Table 3 show the description of preventive measures for sickle cell crisis by adult sicklers. The result shows that 150(67.7%) of the respondents answered yes to not drinking enough water as a triggering factor, 87(35.5%) answered no to not drinking enough water as a triggering factor. 144(62.1%) answered yes to malaria as a triggering factor of sickle cell crisis, 88(38%) answered no to malaria as a triggering factor. 11(4.7%) answered yes to other infections as a triggering factor while 291(95.3%) answered no to this; 40(17.2%) answered yes to exposure to hot weather as a triggering factor, 192(82.8%) answered no to exposure to hot weather, 78(33.6%) answered yes to exposure to cold weather as a triggering factor, 154(67.4%) answered no to exposure to cold weather as a triggering factor; 75(32.3%) answered yes to emotional stress as a triggering factor while 157(67.7%) answered no to emotional stress as a triggering factor. 16(70%) answered yes to climbing a hill as a triggering factor while 216(93%) to climbing a hill as a triggering factor, while 216(93%) answered to climbing hill as a triggering factor. 16(69%) answered yes to working for a long time as a triggering factor, 216(93.1%) answered no to working for a long time as a trigger. All the respondents answer no to eating fatty food, eating beans and drinking tea as a trigger. 77(33.2%) of the respondents answered yes, that balanced diet can help prevent sickle cell crisis, while 158(66.8%) answered no that balance diet do not prevent crisis; 174(75%) answered yes to drinking enough water as a preventive measure, while 58(25%) answered no, that it does not prevent crisis. 149(64.2%) answered yes to preventing malaria as a preventive measure and 83(35.8%) answered no to preventing malaria crisis prevention; 43(18.5%) answered yes to preventing other infections while 189(81.5%) to preventing other infections as crisis prevention, 33(14.2%) answered yes to having adequate rest as a preventive measure while 199(85.8%) answered yes to having adequate rest as preventive measure to crisis; 16(6.9%) answered yes to moderate exercise as a preventive measure, 216(93.1%) answered no, to moderate exercise as a preventive measure for sickle cell crisis. 8(3.4%) answered yes to avoiding fatty foods as a preventive measure of sickle cell crisis, while 224(96.6%) answered no to avoiding fatty food. 54(25.4%) answered yes to avoiding extremes of weather conditions, 173(74.6%) answered no to avoiding extremes of weather. 62(26.7%) answered yes to managing stress well as a preventive measures of sickle cell crisis while 170(73.3%) answered no to managing stress as preventive measure of sickle cell crisis.

Discussion

The results indicate that the obvious manifestation of sickle cell crisis are pains in the chest and stomach, pains in the bones of the legs, arms and hips and pains in the joints. Fever, headache and chills may also be with Kato et al (2009), Ibe (2009) Brunner and Smeltzer (2010). There is obvious variation in their description of the manifestation of sickle cell cross that may be explained by the fact that different people with the disease experience the crisis in different ways.

A good number of the respondents recognized that dehydration and malaria are the main triggering factor of sickle cell crisis. This should not be seen as having poor knowledge of other factors like infection, extremes of weather condition, strenuous activities and poor diet. The patients described the triggering factors based on their personal experience. This finding still agrees with Al-arranged (2007), Oniyongi and Omari (2009) and Dihya et al (2009) because some of the respondents attributed the crisis to extreme weather condition, malaria, stress infections and poor diet.

The description of triggering factors of sickle cell crisis reflected in their description of the preventive measures for the crisis. Most of the respondents pointed out that prevention of malaria and drinking enough water serve as preventive measure to the crisis and few still described avoiding extremes of water conditions, managing stress, balance diet, preventing other infection and having adequate rest as preventive measures. One thing obvious here is that these patients were attending sickle cell clinic and they all got the some information an triggering factors and the preventive measures yet each one of them responded in accordance with their personal experiences of the triggering factors and preventive measures. This brings out the facts that sickle cell patients should be given individualized care.

IV. CONCLUSION AND RECOMMENDATION

The study showed that though there is obvious manifestation, triggering factors and preventive measures for sickle cell crisis yet the patients do not experience the same way. It is then recommended that sickle cell patients should be given individualized care in other to help them handle the crisis.

V. REFERENCES

[1] WHO (2006) sickle cell anamia. Fifty-Ninth World Health Assembly provisional agenda item 11.4 http://www.who.int/whr/2006/en wheel 13/9/13

[2] News Agency of Nigeria (2011) publication dailytimes.com.ng/author/news-agency-nigeria,retrieved 20/12/113

[3] Ibe, E.O, Ezeoke, CJ, Emeodi E.I, Akubugwo E., Elekwa M.A., Ugonabo and Ugbaka WC (2009) Electrolyte profile and prevalent courses of sickle cell crisis in Enugu Nigeria. African journal f Biochemistry Research Vol. 3 (11), pp 370-374

[4] Kato, GJ, Hebbel, RP steinbery M.H and Gladwin MT (2009) vasculapathy in sickle cell disease: Biology, pathophysiology, genetics, translational medicine and new research direction. American Journal of Hematily vol 84(9): 618-625.

[5] Brunner L.S and Smeltzer, CO (2010) sickle cell anemia, Brunner and Suddarth's Textbook of medical-surgical Nursing 12th edition. Lippincott-Roven publishers, Philadelphia

[6] Al-Arayged S, Hamza A and Sultan, B (2007), Neonetal Screening for Genetic blood disease Bohrain medical Bulletin vol 29(3)pp88-90

[7] Oniyangi, O and Omari, AA (2009) Malaria chemoprojchylaxis in sickle cell dieases. http://www.thecpchranelibrary.com

[8] Dihya, EJ Fatima, K.A, Khadija M.A, Nafeesa AM, Ridha AH and Mahdi Z.M (2009) Aduly sickle cell disease patients knowledge and attitude toward the preventive measures of sickle cell disease crisis. International Journal of Nursing and Midwifery Vol 1(2) 010-018.