Dealing With Sickle Cell Anemia

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Introduction:

Sickle cell anemia health condition is an inherited disease where the infected person's hemoglobin is characterized by abnormality depicted by the sickle-like shape. (National Heart, Lung and Blood Institute, (2016). This paper will discuss sickle cell anemia disease, the guidelines, and reasons for the regulations provided by the FDA guiding the introduction of new pharmaceutical agents as a policy. The ethical considerations in the process of dealing with sickle cell anemia, the role that grants as well as money perform in scientific advances, and a comparison of how genetics can be applied to improving health and care outcomes with a reduced cost on sickle cell disease management practices will be provided in the paper. A discussion on the changes in approaches applicable in care in cases where new evidence is found to offer an evaluation of other methods of decreasing the competitive effects of sickle cell disease will also be found in the paper. In conclusion, an educational plan for colleagues on the genetic disorder will be created.

Background Understanding Of Sickle Cell Anaemia:

Since hemoglobin moves in the blood transporting oxygen, the cells are round shaped and move freely as well as have a long life span to ensure adequate transportation of oxygen and sufficient production of the hemoglobin to replace dead cells. However, in the case of a person hailing from sickle cell, the affected cells have a reduced life span and as well have immobility traits (National Heart, Lung and Blood Institute, 2016). When the sickle cell-shaped hemoglobin moves through small blood vessels, it gets stuck and blocks blood flow, causing pain and other infections such as stroke and acute chest syndrome (Cdc.gov, nd).

The diseases are direct results of the disorder; thus, their curation is also based on curing the disease. According to Cdc.gov, facts about sickle cell disease SCD is only curable through bone marrow/stem cell transplant since it is the site for manufacturing blood cells. However, the plan for a cure is risky since it can lead to deaths, although it works best under close watch as well as for children with minimal damage to organs from the disease (Cdc.gov, nd).

Guidelines And Reasoning Behind The Regulations Provided By The FDA In The Introduction Of New

Pharmaceutical Agents:

The FDA works under the guidance of *The Drug Amendments Act of 1962* since the act requires the body to approve all new drug applications where the safety and effectiveness of the first drug must be guaranteed. Following the guidelines provided by the 1962 Amendment Act, the FDA is charged with the responsibility to ensure that drug production complies with the operational *Good Manufacturing Practices* (GMP) followed by official drug registration establishments. The drugs authority ensures that quality and profitable training is offered to pharmacologists to make sure that they receive the capacity to confidently deal with health issues towards drugs' safety and efficiency (Rägo & Santoso, 2008). Both over-the-counter medications and prescriptions for drugs are responsibilities that FDA works to realize their safety, effectiveness, and quality. As a matter of fact, data concerning a new drug and the proposed labeling is reviewed by a team of experts from the FDA (FDA.gov., ed.).

Ethical Issues Involved In Dealing With Sickle Cell Anemia:

Since the blood disorder leads to numerous effects with physical, emotional, and psychosocial suffering, including the occurrence of other diseases, ethics must be put into practice to help solve the health challenge. Towards contributing to combating the disease, prenatal diagnosis, as well as genetic counseling, is offered in health institutions. The question on genetic questions, abortion of fetuses that are affected, and prenatal diagnosis safety in sampling are the key issues that demand ethical considerations in the process of combating sickle cell genetic disorders. Prenatal diagnosis procedures may lead to chances of miscarriage, thus the need for increased care through ethical operation. Also, reliability and safety in health care must be considered in cases where abortion of an affected fetus is chosen (Fadare, 2009).

The Changes In Approaches To Care When New Evidence Warrants Evaluation Of Other Options For Improving Outcomes Or Decreasing Adverse Events Of Sickle Cell Disease:

The current care witnessed in solving sickle cell anemia health problems is built on early diagnosis of sickle cell anemic conditions in children or fetuses during pregnancy. The diagnosis helps inadequate and quality care in the time since the disease is discovered. Appropriate medical evaluation and interventions based on therapy are realized through the current measures and applications witnessed in the process of treating sickle cell anemia. Since historically and longtime untreated cases of sickle

cell anemia lead to increased cases of death, as observed in the medical field thus, the demand for early and specialized care remains paramount (McGann, Nero & Ware, 2013).

The Role Played By Money And Grand In Medical Care And Genetic Changes:

Indeed, mutual support for genetics exists in society as it continues to support and finance research projects that may bring about a breakthrough in medicine. No matter how big the amount tends to be, society usually has the perception that genetics will improve the overall medical system. Although there still exist disparities between health and wealth, such breakthroughs may develop a medicine that is relatively cheap and readily available to the public. Some of the new drugs may be entirely reasonable to patients suffering from sickle cell anemia. Research in genetics also assists medical professionals in monitoring the evolution of the disease's genetic structure and how it responds to certain chemicals and environments. Overall, the ethics prevalent in genetic testing create the control mechanism in which there is moderation and minimal exploitation of subjects with evolved genetic coding that may spearhead the development of new drugs to combat the disease.

Action Plan:

Ethical movement in the medical field is deemed worthwhile; thus, action plans toward helping remedy or educate people on sickle cell anemia must be conducted in an ethical manner (Fadare, 2009). Since sickle cell anemia is one of the genetic diseases passed from the parent to an offspring, actions towards helping solve the challenges that the disease leads to or reducing the chances of contracting the disease, then the workable plan must be rooted in the causes and solutions to the same. Counseling increased prenatal guidance and direction on genetic disorders must be availed to young couples as well as those living with the condition to help reduce the chances of having children with the disease. The fundamental concern that the action plan seeks to unmask is increased awareness of the causes, solutions to the already infected, and methods applicable in reducing the chances of having children suffering from the disease.

References

Benatar, S. R., Gill, S., & Bakker, I. (2011). Global health and the global economic crisis. *American Journal of Public Health*, *101*(4), 646-653.

Cdc.gov, (nd). Facts about Sickle Cell Disease. Retrieved June 13, 2017. From https://www.cdc.gov/ncbddd/sicklecell/facts.html

Fadare, J. O. (2009). Some ethical issues in the prenatal diagnosis of sickle cell anemia. Annals of

Ibadan postgraduate medicine, 7(2), 26-28. Retrieved June 13, 2017. From https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4111006/

FDA.gov., (nd.). How Drugs are Developed and Approved. Retrieved June 13, 2017. From https://www.fda.gov/drugs/developmentapprovalprocess/howdrugsaredevelopedandapproved/

McGann, P. T., Nero, A. C., & Ware, R. E. (2013). Current management of sickle cell anemia. *Cold Spring Harbor perspectives in medicine*, *3*(8), a011817. Retrieved June 13, 2017. From https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3721270/

National Heart, Lung and Blood Institute, (2016). What Is Sickle Cell Disease? Retrieved June 13, 2017. From https://www.nhlbi.nih.gov/health/health-topics/topics/sca

Rägo, L., & Santoso, B. (2008). Drug regulation: history, present, and future. Drug Benefits and Risks: International Textbook of Clinical Pharmacology, revised 2nd edition.