EVALUATE THE USE OF HYDREA IN TREATING CHILDREN WITH SICKLE CELL ANEMIA IN CENTRAL AFRICA'S RURAL AREA

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Abstract

Sickle cell anemia is highly prevalent in Central Africa. The disease causes severe manifestations in children requiring treatment. Hydroxyurea is currently the most effective drug treatment. Therefore, we evaluated the use of HU in children living in rural Central Africa. We conducted a clinical trial with HU from November 2017 to February 2020 in the Hôpital Saint Luc de Kisantu in the DR Congo. Patients aged 6 months to 18 years with a moderate or severe form of SCA (Adegoke score) were treated with an initial HU dose of 15mg/kg per day, which was increased gradually in increments of 5mg/kg per day every six months, to a maximally dose of 30mg/Kg/day. To determine the clinical and biological response to the treatment, we compared the clinical and biological data from the first and second year of treatment with the baseline. From the 136 SCA children followed at KSLH, 69 (37 boys and 32 girls; sex-ratio M/F 1.15) started the clinical trial with HU. Of them, 39 patients reached the end of the clinical trial (56.5%). We observed a mean increase in the HbF rate of 3-fold at 12 months and 3.3-fold at 24 months, with a significant difference from the baseline. Thirty-seven (80.4%) patients presented a good clinical response, and 9 (19.6%) did not respond. In conclusion, our clinical trial showed the effectiveness of HU treatment clinically and biologically. Despite tremendous logistical difficulties, HU treatment in a rural area offers the prospect of improving the quality of children with SCA' life.

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