Prevalence and Pattern of Birth Defects in a Tertiary Health facility in the Niger Delta area of Nigeria.

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Background
- During the last ten years, there has been a significant increase in the number of women delivering babies with birth defects in the Niger Delta area of Nigeria.
- This may be due to the systematic catastrophic degradation of air, water and soil quality by the processes of petroleum and gas production, transport and usage in the region for the past 52 years.

Aim
- The aim of the study is therefore to find out the prevalence and pattern of congenital abnormalities that are peculiar to the Niger Delta.

Methodology
- Firstly, a literature review on the prevalence, aetiology and management of congenital abnormalities in the Niger Delta and the world at large was performed.
- We also searched for the systemic distribution of birth defects in different regions of Nigeria and the developed world.
- Secondly, we reviewed all the deliveries that occurred at the University of Port Harcourt Teaching Hospital UPTH between August 2011 and December 2014, using the delivery record on the labour ward, patient’s case notes and the admission / discharge register of the special care baby unit of the hospital.
- Birth defects were classified according to the systems that were affected, using the recommendation of the World Health Organization (WHO).
- We extracted from the available documents information on the total number of life births and the babies that were delivered with birth defects.

Statistical Analysis
- Data was entered and analysed using SPSS, version 22.0.
- The prevalence of the abnormalities was calculated per 1000 life births and as percentages of the total anomalies, for the booked and the unbooked patients.
- Simple proportions were used in the descriptive analysis.
- Bivariate analysis was also conducted. Comparative analysis of the prevalence of birth defects in different regions of Nigeria and Europe was conducted by using the P-value and Chi-square.

Results
- Out of the 7670 deliveries that occurred at the University of Port Harcourt Teaching hospital in the Niger Delta from August 2011 to December 2014, 159 maternities had babies with major birth defects giving a prevalence of 20.73 birth defects per 1000 life births.
- This figure was far more than that which was obtained from other regions of Nigeria, in the South Eastern Nigeria, out of 14,446 life birth, 60 women had babies with birth defects, giving a prevalence of 4.15 per 1000 life births (P = 0.00).
- In the South western Nigeria, out of 22,288 life births, 353 women had babies with birth defects, giving a prevalence of 15.84 per 100 life births (P = 0.004).
- The corresponding figures for the North Eastern part of Nigeria were 13619 for total life births, 75 for women who had babies with birth defects and 5.51 per 1000 life births (P = 0.000) for prevalence of birth defects.
- Comparison was also conducted with the EUROCAT study where out of 783,556 life births, 15,867 women had babies with major defects, giving a prevalence of 20.24 per 1000 life births (P = 0.766).
- Out of the 5989 booked patients and 85 out of the 1681 unbooked maternities (women who are not booked with the hospital) gave birth to babies with birth defects; this amounted to a prevalence of 12.36 per 1000 life births and 50.57 per 1000 life births for the booked and the unbooked patients respectively (P = 0.000).

Conclusions
- The Niger Delta area of Nigeria is plagued with very high prevalence of obvious birth defects at 20.73 per 1000 life births.
- The prevalence of the defects is higher than that obtained in other regions of the country, with the unbooked patients more affected than the booked.
- All body systems were affected with those of the central nervous system predominating at 27.0 % of the total diagnosed birth defects.
- In view of the the very high prevalence of obvious birth defects that was noted in the study, it is recommended that a standard Fetal medicine unit be opened in the Teaching Hospital so that the defects can be diagnosed during the antenatal period; appropriate counselling will then be given to women.
- A well structured prospective study will be carried out on the subject. Attention will be paid to environmental pollution as one of the main causative factors of the abnormalities. A laboratory-based study - analysis of the end products of metabolism of some of the teratogens (hydrocarbons, heavy metals and others) will be carried out.

Literatures