

Short Communication

Rhesus negative pregnant women in a traditional birth home in Abeokuta, Nigeria

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In a survey of 200 pregnant women (mean age 24 years) attending a traditional birth home (TBH) in Abeokuta, Nigeria, 19 (9.5%) were found to be rhesus negative, 8 (42.1%) of which were primigravidae while 11 (57.9%) were multigravidae. 87.5% of the Rhesus negative primigravidae delivered at the TBH without being given the post partum injection of anti-D-gamma globulin within 72 h of delivery, thereby having their systems likely sensitized (if baby is rhesus positive) against subsequent pregnancies involving Rhesus positive fetuses. Of the multigravidae involved in this study 27.3% women delivered live babies at the traditional birth home while the remaining 72.7% women were not seen again at the TBH. One woman who has had an induced abortion and was carrying a second pregnancy lost the pregnancy in the course of this study. The knowledge of these women (who were mostly without formal education) on their haematological status is nil. The need to educate the public, especially women patronizing TBH, on the rhesus problem is recommended.

Key words: Pregnancy, Rhesus factor, traditional birth home.

INTRODUCTION

In 1940, Landsteiner and Wiener found that rhesus (Rh) immunization was because of fetal blood group antigen inherited from father invading the maternal circulation and causing maternal immunization. Furthermore, attention was called to the clinical importance of Rh immunization in 1941 and it was obvious that hemolytic disease of the newborn resulted from Rh sensitization (Gravenhorst, 1982) and possibly in the death of fetus/newborn (William, 1997).

The proportion of Rh-negative individual is put at about 4% among black Africans (Keith and Berger, 1982) and studies have shown that rhesus immunization is one of the primary reasons for perinatal mortality (Volkov, 1988). Abortion of pregnancies could also be responsible for maternal sensitization (Keith and Berger, 1979); this is known to be approximately half the risk incurred by full term pregnancy and delivery (Ralph, 1982). However, the

use of anti-D-gamma globulin after abortion and the education of public especially school children about the effect of being rhesus negative has been considered necessary.

In Nigeria today, a fair proportion of indigenous women patronize traditional and religious birth homes for antenatal care and deliveries. However, the quality of medical assistance and or education provided during pregnancy and the perinatal periods is known to play a significant role in the survival of the newborn. During a recent investigation on malaria infection among pregnant women and their knowledge attitudes and practices toward the infection, we came across a fairly large number of pregnant women receiving antenatal attention in a traditional birth home (TBH). Here, we present the results of our observation. The treatment received by each patient depended on the complaints of the patient. Generally the traditional healer claimed to have the capacity to treat malaria, fever, pains and anaemia as well as give delivery care. Therefore, there is need to

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focus on these group of women in order to evaluate the quality of medical assistance offered to them at the traditional birth homes. This study is therefore aimed at determining the proportion of Rh-negative pregnant women attending a traditional birth home in Abeokuta and to evaluate the knowledge of these women on their blood type and the possible solution available to them.

MATERIALS AND METHOD

The traditional birth home used is located in Abeokuta, Ogun State Nigeria. Approval was first obtained from the owner of the TBH for the use of the home, after which informed consent was obtained from the pregnant women attending the TBH. The home consisted of a healer and an attendant whose services centered mainly in the administration of leaves, barks and roots of undisclosed plants.

After obtaining relevant personal biodata (age, parity, educational qualification), venous blood was collected from the pregnant women using sterile needles and syringes into labeled EDTA bottles and were later taken to the laboratory where tests to determine their blood group and rhesus status, were carried out using the rhesus typing test (Philip, 1964).

In depth interview were also carried out amongst the pregnant women to determine their knowledge of the Rhesus factor and the effects on the mother and unborn foetus. In addition to this home, three other traditional and seven religious birth homes were visited to inquire if haematological investigations were included in their antenatal care delivery.

RESULTS AND DISCUSSION

Of the 200 pregnant women seen attending a TBH for antenatal care (ages 17-31 yrs), 19 (9.5%) were rhesus negative. Eight (42.1%) of these were primigravidae while 11 (57.6%) were multigravidae. Among the multigravidae, 3 (27.3%) were carrying a 2nd pregnancy (para = 2) while the remaining 8 (72.7%) were carrying the third or more pregnancy (para > 2). All the para = 2 delivered live babies at the TBH while the women with para >2 did not complete their antenatal care at the TBH.

Also 7 (87.5%) of the rhesus negative primigravidae delivered live babies in the TBH. However, no post partum injection with anti-D-gama globulin was administered to any of them. In the course of the observation one of the pregnant women lost her pregnancy (in the 2nd trimester). She had an induced abortion in her first pregnancy.

Thirty-six point eight percent (36.8%) of the women had no education, 42.1% only elementary, while 15.7% were primay schoolteachers. All the women displayed ignorance of these haematological conditions as well as

possible complications associated with negative rhesus conditions. They believed that abortions and stillbirths in women were spiritually motivated, while jaundice in babies was due to excessive exposure of the baby to sunlight during pregnancy. The women cited traditional beliefs, peer and parental influences as responsible for their patronage of the TBH.

Interviews conducted at the 3 other TBHs and Religious birth homes (RBHs) also showed that haematological investigations were neither part of routine antenatal care, nor the administration of anti-D-gamma globulin where necessary.

This study showed that about 9.5% of the pregnant women attending the TBH were rhesus negative. This is in excess of the 4% reported by Keith et al. (1982) among black Africans. The larger proportion in this study may probably be due to the small sample size, or that most of the rh negative mothers in this community have no knowledge of anti Rho (D) immunization; they have overtime only been able to give birth to rhesus negative infants since such infants are not likely to be attacked by maternal antibodies unlike rhesus positive infants that are usually at risk of intra-uterine anaemia and possibly death (William, 1997). Studies have shown that 55% of Rh-positive fathers are heterozygous and may have Rh negative offsprings (Richard et al., 2000).

The 87.5% rhesus negative primigravidae who delivered rhesus positive babies at the TBH are at risk of developing antibodies against subsequent rhesus positive foetus that may develop in their womb since treatment at the TBH does not include administration of Rho GAM, a commercial IgG preparation directed against D antigen. These women go away with their system immunized against rhesus positive blood.

The reason for the loss of pregnancy recorded in one of the women in the second trimester of pregnancy is probably due to the fact that she has had an induced abortion before this pregnancy and was not administered the anti-Rho immunization prophylaxis after the abortion. Her immunity against the rhesus positive foetus was probably responsible for the loss of the pregnancy. The Rh antibody is known to be able to cross the placenta from around 12 weeks of pregnancy and the baby would begin to become affected by the antibodies already present in the mother's blood stream from the beginning of the 2nd trimester of pregnancy. The patient was promptly advised to register subsequent pregnancy in an hospital for proper assessment.

Of the rhesus negative multigravidae in this study 27.3% (para = 2) of the women delivered at the TBH while there was no delivery record for the remaining 72.7%. The possible reason for the deliveries recorded among the multigravidae (para = 2) include:

- 1: The level of anti D igG antibodies (low titre value) were not sufficient to cause any damage to the foetus (Richard et al., 2000).

2: The husbands of such women were likely to be rhesus negative or heterozygous rhesus positive in which case his genetics allows him to produce rhesus negative offspring 50% of the time and rhesus positive offspring the remaining 50% of the time (Richard et al., 2000).

In conclusion, the care given to women patronizing traditional birth homes does not include any haematological investigations to reveal the rhesus conditions thereby increasing the risk and complication associated with rhesus negativity of which perinatal mortality is most rampant. This therefore falls short of standard requirements for antenatal care. This study has indicated need to educate the public especially those patronizing different birth homes ranging from religious homes to traditional homes and personal home deliveries for antenatal care and those who do not have access to medical health care on the potential medical problems associated with the Rhesus factor.

REFERENCES

- Gravenhorst JB (1982). Prevention of rhesus (D) isoimmunization after abortion. In Keirse MJ, Gravenhorst JB, Van Lith DA, Embrey MP (eds) Second trimester Pregnancy termination. The Hague, Netherlands, Martinus Nijhoff, Boerhaave series for Postgraduate. Medical Education Vol. 22: 168 – 173.
- Keith LG, Berger GS (1979). Prevention of Rh sensitization after abortion. In Zatuchni GI Sciarra JJ, Speidel JJ (eds), Pregnancy termination: procedures, safety and new developments. Hagerstown Maryland, Harper and Row, 1979, 294-302 PARFR Series of Fertility Regulation.
- Keith LG, Berger GS (1982). Spontaneous or induced abortion and the risk of Rh immunization. *Contracept. Fertil. Sex.* 10: 323–331.
- Moise KJ (2002). The Process of Alloimmunization: In UNC Department of Obstetrics and Gynaecology Directory. www.med.unc.edu/obgyn\rh.htm.
- Philip HM (1964). *Manson's tropical Diseases (A manual of the disease of warm climates)*. 15th Edition Cassell and company, London, pp. 850.
- Ralph CB (1982). *Current Obsteric and Gynaecologic Diagnosis and treatment* Fourth Edition. Lange Medical Publications, California pp. 827.
- Richard E, Behrman, Robert M. Kliegman and Hal B. Jenson (2000). *Nelson textbook of Pediatrics*. 16th Edition M. B. Saunders Company California, pp. 521
- Volkov IM (1988). Prevention of perinatal mortality. *Feldsher. Akush.* 53: 3 – 6.
- William NK (1997). *Internal Medicare* Third Edition. Lippincott–Raven Publishers New York, pp. 1525.