

## CASE REPORT

# The Benefits of a Guideline on Safe Termination of Pregnancy for Legal Indications: An Illustrative Case Report of a Hydranencephaly

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## Abstract

After years of the worsening burden of unsafe abortion and attendant morbidities and mortalities in Nigeria, a National Guideline on the Safe termination of pregnancy for legal indications was enunciated. This report presents and discusses an illustrative case of a hydranencephaly that benefited from it. A 43-year old multipara was informed during routine ultrasonography at booking for antenatal care, at 16 weeks of gestation, of a major defect in her baby and advised to meet her physician. Following a repeat high-resolution ultrasonography and discussions between the Obstetricians, Neurosurgeon, and Ultrasonologist, the woman was counseled on the diagnosis. At her insistence and provision of written consent, medical abortion with Mifepristone and Misoprostol was successfully instituted. (*Afr J Reprod Health 2019; 23[2]: 148-151*).

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**Keywords:** Pregnancy termination, Hydranencephaly, misoprostol, abortion

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## Résumé

Après des années du fardeau croissant d'avortements à risque et de morbidités et mortalités connexes au Nigéria, une directive nationale sur l'interruption de grossesse dans de bonnes conditions de sécurité pour des raisons légales a été énoncée. Ce rapport présente et discute un cas illustrant d'une hydranencéphalie qui en a bénéficié. Une multipare âgée de 43 ans a été informée, lors d'une échographie de routine, quand elle faisait une réservation pour des soins prénatals, à 16 semaines de gestation, d'un défaut majeur de son bébé et elle a été conseillée de consulter son médecin. Après une échographie répétée à haute résolution et des discussions entre les obstétriciens, le neurochirurgien et l'ultrasonologue, la femme a été informée du diagnostic. Sur son insistance et l'obtention d'un consentement écrit, un avortement médicamenteux avec mifépristone et misoprostol a été instauré avec succès. (*Afr J Reprod Health 2019; 23[2]: 148-151*).

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**Mots-clés:** Interruption de grossesse, hydranencéphalie, misoprostol, avortement

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## Introduction

Nigeria's laws on abortion are very clear, they permit termination of pregnancy only when the continuation of pregnancy constitutes a threat to the woman's life. However, clinicians have been contending with the challenges of interpretation and operationalization of these laws

until the recent enunciation of a *National Guideline on the Safe Termination of Pregnancy for Legal Indications*<sup>1</sup>. In addition to presenting the extant laws in reference, this guideline provides the list of relevant medical indications for pregnancy termination and provides a step-by-step description of the management of such cases. This case report provides an illustration of the new

capacity that accrued from the emergence of the guidelines.

## Case Report

Ms. HY was a 43-year old Civil Servant, who was gravida 4, para 3, with all children alive, and her last childbirth was three years earlier. She presented at antenatal clinic of Ahmadu Bello University Teaching Hospital, Zaria in July 2018, for booking at 16 weeks gestation, with a routine ultrasound scan report that suggested “severe foetal hydrocephalus”. She was a known retroviral disease patient, diagnosed seven years earlier, currently on tenofovir, lamivudine and efavirenz regimen. Her latest viral load was 1,238 and CD4 count was 528. All preceding pregnancies were booked, with hospital deliveries at term and the three children were confirmed as retroviral disease negative and normal after weaning. She was not diabetic, had no history of exposure to or ingestion of teratogenic substances. She was in a non-consanguineous but serodiscordant marriage.

Physical examination at booking indicated that she was otherwise normal and abdominal finding suggested fundal height was consistent with about 18 weeks gestation. Routine laboratory investigations had confirmed the absence of anaemia or renal impairment. The patient exhibited apprehension during the visit, revealing that the ultrasonologist had disclosed the observation of a “major abnormality in her baby”, and requested to have it terminated immediately.

The patient was reassured and counseled that it was necessary to further confirm the diagnosis, perform some investigations and consult with colleagues before any conclusive recommendations could be made to her. Laboratory investigation results revealed the following results: haemoglobin 10.5g/dl, venereal disease research laboratory (VDRL) was negative, hepatitis B surface antigen and hepatitis C virus were both negative, blood group O positive, genotype ‘AA’. A repeat but high-resolution ultrasound scan was performed in the Radiology Department, with simultaneous review

by consultant radiologist, neurosurgeon, an obstetrician, who concluded: fluid collection in the cranium with the absence of the cerebrum. The thalami, falx, and cerebellum were present. A diagnosis of hydrancephaly was made.

The patient and her spouse were counselled on the diagnosis and the poor foetal prognosis, by the obstetrician and neurosurgeon. The couple consented for a termination of the pregnancy and gave written consent after further counseling on treatment options were administered. The options discussed were those of medical sequential *Mifepristone and Misoprostol* and surgical *Dilatation and Evacuation*. She opted for the former.

The patient was prepared for the medical termination of pregnancy by carrying out clinical and laboratory examinations as stated in the guideline. Her vital signs were stable, fundal height was 18 weeks size, haemoglobin was 10.5g/dl and a unit of blood was grouped, cross-matched and kept in case there was a need to transfuse. She was administered mifepristone 200mg tablet orally by noon and was told to come back to the hospital two days later in the morning for completion of the process. She presented as told and was admitted in the gynaecology ward, counselled on what to expect; especially abdominal pains and the need for analgesia which she declined and said she would wait until the pains became unbearable. Misoprostol 800ug was administered vaginally at 12 noon. About two and a half hours later she expelled a dead fresh conceptus and placenta, the blood loss was minimal. The couple declined consent for autopsy and took it home for burial. She was observed overnight and counselled on vaginal bleeding, resumption of coitus, and resumption of fertility before discharge. At the follow-up clinic after two weeks, she had no complains and expressed satisfaction with the method of treatment. She was counselled on the need for family planning but declined any modern method of contraception. The importance of preconception care was explained to her since she indicated she had not completed her family size.

## Discussion

Hydranencephaly is an uncommon congenital malformation of the central nervous system in which the cerebral hemispheres are replaced by cerebrospinal fluid. It is the severest form of bilateral cerebral cortical destruction with an incidence of less than 1 per 10, 000 births worldwide<sup>2</sup>. The exact cause of this malformation is unknown but various theories have been postulated. These include bilateral occlusion of the internal carotid or middle cerebral arteries, intrauterine infections especially toxoplasmosis and viral infections like Herpes simplex, Ebstein Barr, adenovirus, intrauterine exposure to teratogens and thromboplastic material from a dead twin<sup>1</sup>. The diagnosis of hydranencephaly can be made antenatally using ultrasonography or magnetic resonance imaging (MRI) in all the trimesters of pregnancy<sup>3,4</sup>. Various studies have reported cases that were diagnosed antenatally and confirmed postnatally by MRI, CT or autopsy<sup>2,5</sup>. Most cases of hydranencephaly are born dead or die within a few days after delivery. Although few cases surviving beyond a decade have been reported, prognosis is still very poor, as they end up with severe neurological dysfunctions such as deafness, blindness, seizures, intellectual problems, and respiratory failure<sup>1,6</sup>. It is for this bleak foetal and pregnancy outcome that this severe form of foetal malformation is included as a legal indication for termination of pregnancy in Nigeria and worldwide. The participatory contribution of the ultrasonologist, neuro-surgeon, and gynaecologist in the management of this patient, illustrates the new-found openness and confidence that this guideline has introduced into the management of cases of this sort. Previously, such cases were either managed under strict research guidelines or without any local medico-legal guidance. More importantly, this patient and her spouse benefitted from comprehensive counseling from her team of doctors and were availed the treatment options between surgical evacuation, the use of only Misoprostol and the combination of Mifepristone and Misoprostol. The patient had the treatment of her choice

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(mifepristone and misoprostol) successfully without any complications. This must have prompted her expression of satisfaction at follow-up and reinforced her confidence in the health system.

It is also pertinent to acknowledge a new vista provided by the management of this case; it provided a platform for discussing and training resident doctors on contemporary and safe techniques of terminating a pregnancy for legal indications, which was hitherto non-existent. Undergraduate and postgraduate doctors in the team that managed this case were involved in the entire process of this patient's treatment. This development is likely to have considerable benefits for the health system, as this emerging capacity is sure to contribute to the reduction of the increasing burden of unsafe abortion and its complications in Nigeria<sup>7,8</sup>.

The etiology of the hydranencephaly in this patient's fetus could not be determined through the laboratory investigations performed and could not be attributed to her retroviral disease or antiretroviral regimen of Tenofovir, Lamivudine, and Efavirenz. Although neural tube defects were demonstrated from Efavirenz use on laboratory animals, this has not been the case with humans<sup>ii</sup>. Whether the woman's advanced age of 43 years was responsible for the foetal abnormality is debatable. Nonetheless, it is hoped that she will comply with the counsel given to her at discharge, to use available preconception and antenatal clinic services to prevent recurrence of the condition in subsequent pregnancies. Her refusal to accept a modern contraceptive was regrettable because it exposed her to a high risk of subsequent unplanned pregnancy.

## Conclusion

A case of severe hydranencephaly at 16 weeks of gestation was successfully managed following *Nigeria's Guidelines on Safe Termination of Pregnancy for Legal Indications*. It involved a demonstration of professional collaboration, patient-centeredness of care, interpersonal communication, and quality assurance. The

success clearly affirms the timeliness of the guideline and its potential for reducing the unacceptably worsening burden of unsafe abortion and its attendant complications in Nigeria, and other countries that replicate the policy.

### Contribution of Authors

Abdullahi, Shittu, Koledade, Uthman and Maikudi all contributed to the management of the patient. Igashi and Bello were the Radiologists. Abdullahi and Shittu were the main contributors to the manuscript, Koledade and Uthman assisted with literature search. All Authors reviewed and approved the final manuscript.

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