EDITORIAL

Misoprostol and Women's Health in Africa

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In March 2005, the World Health Organization (WHO) announced that it has included misoprostol in its essential drug list as part of a regimen for the termination of pregnancy in the first trimester of pregnancy. This welcome development has important implications for the promotion of women's health worldwide and for women in sub-Saharan Africa in particular. Available evidence indicates that countries in sub-Saharan Africa have some of the highest rates of maternal mortality in the world. Of the estimated 550,000 maternal deaths in the world annually, 270,000 deaths (nearly 50%) are known to occur in African countries. The WHO estimates that for every 100,000 live births in Africa, there are 1000 maternal deaths, compared with 276 for Asia, 190 for Latin America and 10 for Europe[1]. Indeed, one in 16 women is estimated to die in her reproductive years from a pregnancy-related cause in many parts of Africa. These alarming rates of maternal morbidity and mortality, which have shown no signs of abating, call for concerted and realistic action to save mothers and newborns in the region.

The results of several studies have shown that the leading causes of maternal mortality in Africa are primary postpartum haemorrhage, unsafe abortion, prolonged obstructed labour, puerperal sepsis and eclampsia[2-4]. For those who are familiar with obstetric practice in these countries, it is clear that one of the most important medical interventions that would significantly reduce the case fatalities associated with these conditions is increased access to a safe and effective uterotonic that is able to contract the uterus and evacuate its contents in a rapid and efficient manner.

For years, the only available uterotonics for use in African countries have been oxytocin and ergometrine. However, the use of these drugs in Africa is limited by a number of factors. In the first place, they rapidly deteriorate and lose their potency under the high temperatures in African countries, unless they are stored in refrigerators which are not always available in these countries. More than 50% of drug potency can be lost by improper storage of these drugs in African countries. Secondly, both ergometrine and oxytocin need to be given intravenously or intramuscularly, a condition that is difficult to fulfil within the low-resource settings of many African countries. Thirdly, and most importantly, these drugs are not always effective because of their site of action. While they are good at stimulating uterine contractions, they have little or no action on the cervix. This means that in conditions that require cervical dilatation such as in second trimester induction of labour, they will achieve uterine contractions without significant cervical dilatation, with limited effectiveness and usefulness. By comparison, prostaglandins are effective in inducing uterine contractions as well as dilating the cervix.

Many cases of unwarranted maternal deaths in Africa occur because of lack of an effective drug to dilate the cervix during induced or spontaneous labour or in cases of missed abortion requiring uterine evacuation. When synthetic prostaglandins first became available, it was thought that these would provide a solution, but they also rapidly went out of favour because of their high cost which put them out of reach of many African countries. The appearance of misoprostol, a prostaglandin E_1 analogue in the late 1980s as a potent and cheap uterotonic was, therefore, received with great expectations by women's health advocates in Africa.

Misoprostol has several advantages over other prostaglandins on the market. These include the following: (1) being an E_1 analogue, it has no effect on the bronchi or blood vessels; (2) it is heat-stable and can be stored for several years without the need for refrigeration; (3) it is active orally, vaginally, sublingually and rectally; (4) it is cheap and affordable; and (5) it has limited side effects. These characteristics have made misoprostol ideally suitable for use in African countries, and strongly

positioned to contribute to reducing the high rate of maternal morbidity and mortality in the region. Unfortunately, no clear efforts have yet been made to promote the use of the drug in Africa.

The use of misoprostol in reproductive health has been extensively studied in various parts of the world, and there is clear consensus of its greater effectiveness compared to other uterotonics[5,6]. Elsewhere, there is now firm and incontrovertible evidence that misoprostol is highly effective in labour induction at all trimesters of pregnancy and in the prevention and treatment of post-partum haemorrhage.

By contrast, only few clinical trials of the use of misoprostol in sub-Saharan African countries are available, and there has been little attempt to integrate its use into reproductive health care in Africa.

The poor use of misoprostol in Africa compared to other parts of the world is attributable to several reasons, the most important of which is the lack of knowledge of the drug by service providers, and health policymakers. Many reproductive health service providers in Africa have limited knowledge of the beneficial effects of the drug. The situation is compounded by the fact that the drug has not been licensed in many African countries for use in reproductive health. The drug was first discovered and licensed for the treatment of gastroduodenal ulcers, and had only been used off label for reproductive health indications in many countries. Consequently, drug inserts directing its use in reproductive health are often not available, which limits the ability of clinicians in developing countries to use the drug for this purpose. To date, the manufacturer of misoprostol, Searle (now incorporated into Pfizer), has failed to apply for licensing for any reproductive health indications despite the well known benefits.

Furthermore, prior to March 2005, miso-prostol had not been included in the essential drug list of the WHO. This meant that many African countries, which rely heavily on the essential drug list of the WHO, did not include misoprostol in their drug procurement and licensing policies. To date, misoprostol is approved for use in reproductive health care in only four countries in Africa, Tunisia, South Africa, Ghana and Uganda, with poor understanding of the drug in the remaining countries in the region. The recent inclusion of the drug in the WHO essential drug list means that the attention of policymakers and drug regulators will now be drawn to the potential health benefits of the drug**,** improving the understanding and use of the drug, particularly in the countries in the region where it has yet to be licensed. This will allow greater integration of the drug into health care delivery in these countries and increase the awareness of women, service providers and other end users. Apart from the likelihood of increased licensing of the drug in countries across the world, the recent decision by the WHO will heighten the possibility that countries will take steps to cover the costs of the drug in their national public health systems. This will increase the affordability, availability and accessibility of the drug to women.

In sum, there can be no doubt that misoprostol is one of the most important discoveries in reproductive health care in the last decade that has considerable implications for reducing maternal mortality in low-income countries. In view of the potentially beneficial effects of misoprostol in reducing the high rates of maternal mortality in Africa, it is no longer morally and ethically acceptable that women are denied the benefits of this drug.

Since the drug exclusively benefits women, the continued poor availability and use of the drug disadvantages African women, and is a form of social injustice. Women's equal access to the benefits of scientific progress is a right protected by international human rights treaties, including the African Charter on Human and Peoples' Rights.[7] The denial of information and service delivery options on misoprostol to African women is a form of discrimination against women and violates their right to security, which governments are obliged to remedy.

We conclude that there is a need for African countries to take steps to license misoprostol and promote its increased use for reproductive health care in their countries. Research must also be intensified to document the use and benefits of misoprostol in improving women's health across African countries and to determine how best to ensure women's fair access to its use.

The reduction of maternal mortality is a public health challenge in Africa and one of the key indicators of the Millennium Development Goals (MDGs), the achievement of which many African countries are currently devoting considerable energy and resources. We believe that increasing access to use of misoprostol is one of the most important interventions that can contribute to a decline in maternal

mortality and lead to the rapid achievement of one of the MDGs in sub-Saharan Africa. The time to act is now!

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