

Caesarean sections done by health officers in south-west Ethiopia¹

Bernt Lindtjørn

E-mail: bernt.lindtjorn@cih.uib.no

Arba Minch Hospital, Ethiopia.

Summary

We recently started a health project with the aim to reduce maternal mortality among the target population by two-thirds by 2015. The aim of the study was to describe the outcome of major obstetric surgery done by general practitioners and Health officers (non-doctors).

Introduction

Deaths from maternal causes represent the leading cause of deaths among women of reproductive age in Ethiopia [1, 2]. Thus, in line with the Millennium Development Goal for maternal health (MDG-5), we recently started a health project with the aim to reduce maternal mortality among the target population by two-thirds by 2015.

Experience from other countries show that two conditions are needed to reduce maternal deaths: Staff should be able to carry out comprehensive emergency obstetric care (CEOC), and these services should be available to and used by the pregnant women [3].

Ethiopia, like many other countries in sub-Saharan Africa has a severe shortage of trained health personnel. Because of the lack of doctors, especially in rural areas, the country needs trained staff to carry out essential obstetric care, including caesarean sections.

The aim of this study was to describe the outcome of major obstetric surgery done by general practitioners and health officers (non-doctors).

Methods

We did this study by prospectively recording operations done by health officers at the government hospitals at Arba Minch, Chench, Saula and Gidole.

Health officers and general practitioners who had done their training at Arba Minch Hospital did all the operations. Their duration of experience after six months of training varied from a few months to six months.

We studied all women undergoing caesarean section during the study period, and we recorded information on admission diagnosis, reason for surgery, preoperative condition, surgeon and surgery. Outcome measures included neonatal and maternal conditions, post-operative complications, and mortality.

¹ Preliminary report (November 24, 2009): We shall regularly update this report.

We used SPSS 18 for data entry and data analysis.

Results

During 2009, we collected data from 207 consecutive obstetric surgeries in four district hospitals in south Ethiopia. All these surgeries were done by general practitioners (38 operations; 18 %) or health officers (169 operations, 82%).

The main indications for surgery were Cephalopelvic disproportion or obstructed labour (76 patients; 37%), Foetal distress (43 patients; 21%), failure to progress (22 patients; 11%), Previous C/S (13 patients; 6%), Antepartum haemorrhage (12 patients; 6%) and the remaining operations were for uterus rupture, cord prolapse, breech in primigravida and eclampsia.

Caesarean section (C/S) was done on 199 operations, and 8 operations were for uterine rupture.

Intraoperative complications occurred in 5 patients. Three of them were serious and one re-operation was done because of bleeding. Three patients needed post-operative blood transfusions. Six patients had post-operative infections.

The mean duration of stay was 7 days after operation.

Two mothers (0.9%) died during operation or during their stay at the hospital. Both deaths occurred during spinal anaesthesia.

There were 23 (11%) stillbirths, and five children (2%) died during the stay at the hospital. The rate of stillbirths varied among the hospitals, with the highest rate at the newly started hospital in Sauala (17 of 23 stillbirths and 3 of 5 early neonatal deaths).

Preliminary discussion and conclusion

Health officers now do most of emergency obstetric operations at hospitals in south-west Ethiopia. The post-operative outcomes are good, and the death rates are less than 1%, which is acceptable by WHO targets [4].

However, we learnt some important lessons. The two deaths that occurred in our programme happened during spinal anaesthesia. This has resulted in retraining of staff, and focus on strategies to reduce risks during spinal anaesthesia at rural hospitals.

The complication and stillbirth rates were highest at Sauala Hospital. This is a newly started hospital, and the operations presented here represent their first 56 operations. Sauala is a remote area, where the population before 2009 did not have access to comprehensive obstetric care. This probably shows that patients present late for treatment, and many patients are severely sick when they arrived at the hospital. In addition, the hospital was new, and lacked necessary experience to tackle severe disease.

Conclusions:

The outcome of emergency obstetric operations in southwest Ethiopia is similar to experiences from Malawi [5]. Health officers make up an important part of the health care team in southwest Ethiopia for saving maternal and neonatal lives given the scarcity of doctors.

References

1. WHO, et al. *Maternal mortality in 2005*. 2007; Available from: www.who.int/reproductive-health/publications/maternal-mortality-2005/mme-2005.pdf.
2. Bryce, J., et al., *Countdown to 2015 for maternal, newborn, and child survival: the 2008 report on tracking coverage of interventions*. Lancet, 2008. **371**(9620): p. 1247-58.
3. Lawson, J., B, K. Harrison, A, and S. Bergström, *Maternity care in developing countries*. 2003, London: RCOG Press.
4. Meyers, J., S. Lobis, and H. Dakkak, *UN process indicators: key to measuring maternal mortality reduction*.
5. Chilopora, G., et al., *Postoperative outcome of caesarean sections and other major emergency obstetric surgery by clinical officers and medical officers in Malawi*. Hum Resour Health, 2007. **5**: p. 17.