

Magnitude and Obstetric Complications of Twin Deliveries at Nekemte Referral Hospital, Western Ethiopia: Facility-based Case Control Study

Acmaru Ayza¹ *, Temesgen Tilahun² and Dechasa Bedada

1 Emergency Obstetrics, Gynecology and General Surgery, Bitana Primary Hospital, Ethiopia

2 Institute of Health Sciences, Wollega University, Nekemte, Ethiopia

3 College of Public Health and Medical Sciences, Jimma University, Jimma, Ethiopia.

INTRODUCTION: Twin pregnancy is a type of multiple birth in which the mother gives birth to two babies of the same pregnancy. It usually results from the fertilization of two separate eggs and rarely from a single fertilized egg. Its magnitude generally increases and varies according to human populations [1-3]. The anatomical and physiological changes in twin pregnancy differ from those in single pregnancy. As a result, it is associated with an increased risk of maternal and fetal complications in developed and developing countries. This is probably worse in sub-Saharan Africa, where the quality and access to health facilities are questionable and poverty is deeply rooted [2-8]. In addition to the high morbidities in the mother, the fetus and the newborn, twin pregnancy causes more deaths in the mother, developing the fetus and the babies compared to the single delivery [4]. Despite its clinical and public importance, studies on the results of twin deliveries and associated maternal complications are limited to a few university hospitals in Ethiopia. It is therefore very important to have a baseline study on this issue in western Ethiopia.

MATERIALS AND METHODS Study area, period and setting The study was conducted in Nekemte Referral Hospital from March 1, 2016 to February 29, 2017 which is found in Nekemte town 331 km west of Addis Ababa. The hospital was established in 1923 and is giving services for more than 2 million people. It is also serving as a clinical post graduate attachment site for medical students, other health science and postgraduate students in Integrated Emergency Obstetrics, Gynecology and General Surgery (IEOS). Twin pregnancy is a type of multiple birth in which the mother gives birth to two babies from the same pregnancy. It usually resulted from fertilization of two separate egg cells and rarely from single fertilized ovum. Its magnitude is generally increasing and varies across human populations. Both the anatomic and physiologic changes of twin pregnancy vary

from that of singleton pregnancy. Because of this fact, it is associated with increased risk of maternal and fetal complications both in the developed and developing countries. This is probably worse in sub-Saharan Africa, where quality and access to health facility is questionable and poverty is deep rooted. In addition to high maternal, fetal and newborn morbidities, twin pregnancy causes more deaths to mother, developing fetus and babies when compared to singleton delivery. Despite its clinical and public importance, studies on the outcomes of twin deliveries and associated maternal complications are confined to few teaching hospitals in Ethiopia. Thus, it is very important to have baseline study on this issue in western Ethiopia. A level of confidence of 95%, power of 90%, ratio of cases to controls of 1:2 and 10% non-responses are considered. This gives sample size, 104 cases (twin deliveries) and 208 controls (singleton deliveries), a total of 312 deliveries. For each twin delivery, two singleton deliveries were clerked by using simple random sampling technique. Data collection procedures A pre-tested structured questionnaire was developed after reviewing similar literatures for the data collection. Two midwives and three nurses were recruited and trained on how to collect and fill maternal data obtained from delivery log books and mothers. All completed questionnaires were checked for completeness by the principal investigator. Ethical consideration The ethical clearance was obtained from the Ethics Review Committee of the College of Public Health and Medical Sciences of Jimma University. After explaining the procedure and purposes of the study to the hospital manager and medical director, permission to clerk the study participants and access to obstetric records and logbooks was obtained from Nekemte Referral Hospital. All the information collected from the registry was handled confidentially through omitting their personal identification and the data were used only for the research purpose.