

A five – year review of patients managed for ectopic pregnancies in the gynecological emergency unit of the Bingham University Teaching Hospital, Jos

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Abstract

Ectopic pregnancy (EP) is a major cause of maternal morbidity and mortality in the first trimester, particularly in low-resource settings. Despite advances in diagnostic and therapeutic modalities, EP remains a critical challenge in Nigeria due to late presentation and suboptimal health-seeking behavior. This study aimed to review the prevalence, clinical presentation, and outcomes of ectopic pregnancies over a five-year period at the Bingham University Teaching Hospital (BHUTH), Jos, Nigeria.

A retrospective study was conducted involving 134 patients managed for ectopic pregnancies at BHUTH between June 2019 and May 2024. Data were obtained from medical records in the gynecological emergency unit, maternity theatre, and antenatal clinic. Descriptive statistics were used to analyze clinical presentations and outcomes. Among the 134 cases reviewed, the most common presenting symptom was abdominal pain (32.1%), followed by amenorrhea (22.4%) and vaginal bleeding (21.6%). Other presentations included ovarian accidents, pelvic abscesses, appendicitis, and asymptomatic cases (23.9%). The findings highlight a predominance of classical symptoms but also underscore the variability in clinical manifestations of EP. Ectopic pregnancy remains a significant burden at BHUTH, with abdominal pain, amenorrhea, and vaginal bleeding as common presentations. There is a need for heightened clinical suspicion, public education on early symptoms, and improved diagnostic strategies to enhance early detection and reduce morbidity and mortality.

Keywords: Ectopic pregnancy; Abdominal pain; amenorrhea; Vaginal bleeding; Gynecological emergency; BHUTH; Nigeria

1. Introduction

Ectopic pregnancies (EP) are the leading cause of maternal mortality in the first trimester, with an incidence of 5%–10% of all pregnancy-related deaths [1]. Earlier reports on complications of (EP) include, adhesion formation, blood transfusion, emotional and psychological distress, fertility impairment, hemodynamic shock leading to multiorgan failure, recurrent ectopic pregnancy, severe hemorrhage and tubal rupture [2-4], [1]. The puzzling nature of (EP) does erase the fact that some patients may not have any risk factors associated with developed ectopic pregnancy amidst identified multiple risk factors have also been associated with it. Most data suggest that ectopic pregnancy is linked with both abnormal zygote transport and change in the tubal environment, which enables abnormal implantation to occur [5-7]. In spite of different research done on the prevalence of ectopic pregnancy, however, the determinants of ectopic pregnancy are not well understood and few researches published in our country were based on secondary data covering

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small scale area and the study area has different characteristics cultural, religious, socio-demographic characteristics, sexual behavior, beliefs, contraception usage and practice from other area [8]. Ectopic pregnancy occurs when a fertilized egg implants outside the uterine cavity, a condition that affects approximately 1% to 2% of pregnancies in the United States [9]. Ectopic pregnancy is a potentially life-threatening condition and accounts for 2.7% of pregnancy-related deaths [3]. Most ectopic pregnancies (approximately 97%) occur within the fallopian tube, commonly linked to underlying fallopian tube abnormalities. (Fylstra 2012) [10], [11]. Such abnormalities may result from prior infections (eg, gonorrhea or chlamydia), tubal surgeries (including sterilization), prior ectopic pregnancies, or exposure to diethylstilbestrol in utero. Additional risk factors include conception while using intrauterine devices (IUDs) or progesterone-only contraceptives [3], [1]. The incidence of ectopic pregnancies in Nigeria is 1.5–2.7/100 deliveries, and the condition is associated with significant mortality. (Udigwe et al., 2020) [12]-[16]. Ectopic pregnancy accounted for 5.2% of maternal deaths at the Lagos University Teaching Hospital (LUTH) between 2002 and 2006 [17]. Poor awareness of the early signs of ectopic pregnancy, poor health seeking behaviour of women and suboptimal diagnostic tools for early pregnancy complications contributed to the high rate of ectopic pregnancy and its sequelae in Nigeria [12], [13]. Ectopic pregnancy is a clinical condition where a fertilized ovum implants outside the endometrium of the uterine cavity. Worldwide, ectopic pregnancy complicates 0.25-2.0% of all pregnancies. High index of suspicion of the clinical triad; abdominal pain, amenorrhea and vaginal bleeding is very important for its early detection and management [18]. Ectopic pregnancy accounted for 5.2% of maternal deaths at the Lagos University Teaching Hospital (LUTH) between 2002 and 2006 [19], while another report on the prevalence of ectopic pregnancy in Jos, North Central Nigeria showed that commonest identifiable risk factors for ectopic pregnancies were pelvic inflammatory disease (PID) in 111(64.5%) of patients followed by previous history of abortions in 17(9.9%) of patients [20].

This study aimed to determine the prevalence and pattern of contraceptive implant uptake among women attending the family planning clinic at Bingham University Teaching Hospital (BHUTH), Jos-Nigeria.

2. Material and methods

2.1. Study site

Bingham University Teaching Hospital (BHUTH) is a 400 Bed tertiary healthcare Facility located in Jos, Plateau State, North Central Nigeria. It was established as Evangel Hospital in February 1959 and was the vision of SIM (then Sudan Interior Mission) and known for its focus on improving health outcomes through expert care, medical training, and research [21, 22].



Figure 1 Google map location of BHUTH [23]

2.2. Study design

A hospital-based retrospective study conducted in the Gynaecology Emergency Unit (GEU) of BHUTH, Jos Nigeria, considering the hospital records of women that present with ectopic pregnancy in the unit Family between June 2019 and May 2024. Patients' records were traced via the hospital records unit, Maternity Theater, ante-natal clinic and the Gynaecology Emergency Unit of same facility, capturing five years duration.

2.3. Data collection and analysis

Hospital records of total of 134 women clients that present with ectopic pregnancy in the Gynaecology Emergency Unit of BHUTH, Jos Nigeria between June 2019 and May 2024 were documented. Collected data were analyzed using descriptive statistics.

Jos Nigeria, between January 2022 and July 2024. Collected data were analyzed using descriptive statistics in form of charts and tables.

3. Results and discussion

This study revealed that the peak age incidence of women that presented with ectopic pregnancy in the EGU of BhUTH, Nigeria was between 25 – 29 years, followed by 30 – 34 (Figure 2). This is similar to previous reports of similar peak ages of presentation of ectopic pregnancy (25 and 29 years), [24-26], suggesting a high risk of future reproductive failure owing to the fact that this age range fall into the age which sexual activity and reproduction reach their pinnacle.

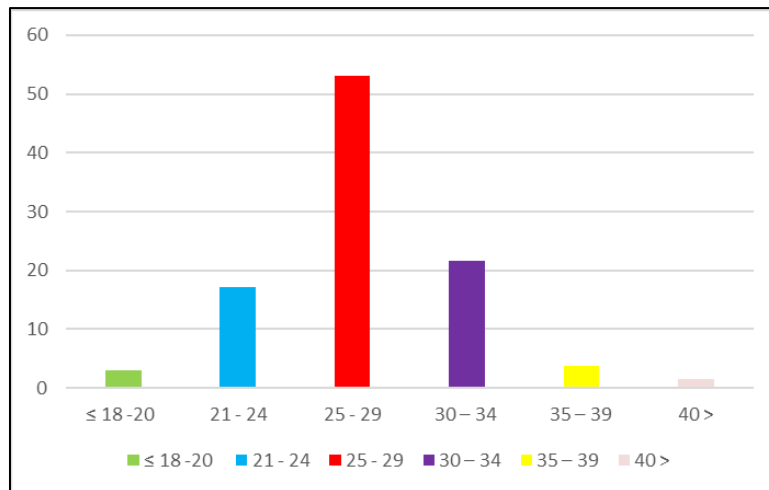
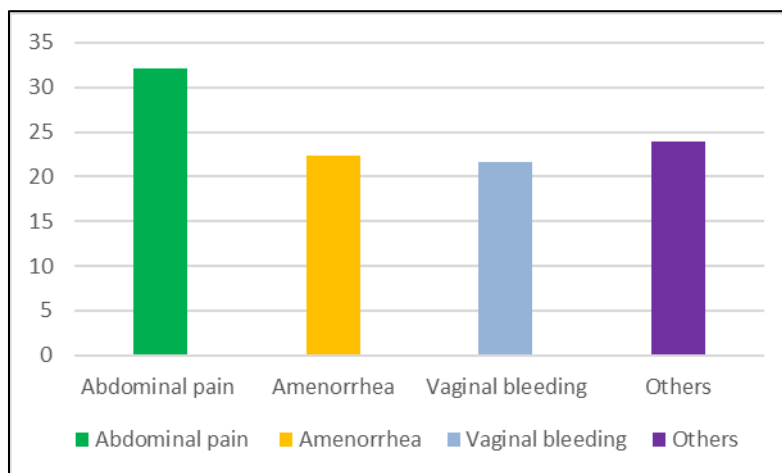


Figure 2 Age range of clients with EP in EGU at BhUTH

This five-year review at BHUTH highlights ectopic pregnancy as a persistent and serious gynecological emergency. The predominance of classical symptoms—abdominal pain, amenorrhea, and vaginal bleeding—is consistent with findings from other Nigerian and international studies with abdominal pain being the commonest clinical presentation in the patients at 96.4% prevalence [27], [6], [28], [29]. The high rate of abdominal pain (32.1%) – Figure 3, in this study and though lower than those in the earlier reports reinforces its significance as an early warning symptom. Nonetheless, its nonspecific nature can complicate early diagnosis, particularly in resource-limited environments where advanced imaging may not be readily available. The lower frequency of amenorrhea (22.4%) – Figure 3, compared to global reports might reflect poor patient awareness or inconsistent menstrual tracking. However, the presence of atypical or asymptomatic presentations (23.9%) poses a diagnostic challenge and suggests the need for routine early pregnancy assessments in emergency settings [25].



Others = Ovarian accidents, pelvic abscess, appendicitis, asymptomatic, pelvic inflammatory disease

Figure 3 Clinical presentations of EP clients in EGU at BhUTH

The presence of other presentations such as pelvic abscess and appendicitis mimics further emphasizes the need for comprehensive differential diagnosis. These findings suggest that without a high index of suspicion, ectopic pregnancies may be missed or misdiagnosed, potentially leading to adverse outcomes. Despite global awareness efforts, ectopic pregnancy continues to claim a substantial proportion of maternal deaths in Nigeria. Cultural beliefs, limited access to care, and low contraceptive utilization remain contributing factors. Strengthening primary healthcare systems, improving public education, and increasing accessibility to diagnostic tools such as transvaginal ultrasound and serum β -hCG testing are essential steps toward reducing the burden of EP.

4. Conclusion

This study underscores the importance of early detection, appropriate triaging, and prompt management of ectopic pregnancies. The insights derived can inform policy and clinical guidelines aimed at reducing maternal mortality associated with this preventable condition.

Compliance with ethical standards

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Disclosure of conflict of interest

Authors declare no conflict of interest.

Statement of ethical approval

Study was approved by the Institutional Ethical and Research Committee.

Statement of informed consent

Not required for this study.

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