ORIGINAL ARTICLE

RISK FACTORS AND OUTCOMES OF ECTOPIC PREGNANCIES AT LAUTECH TEACHING HOSPITAL, OGBOMOSO, NIGERIA: FIVE YEARS REVIEW

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ABSTRACT

An ectopic pregnancy is a frequently occurring gynecological illness that poses a significant risk to the mother's health and can be life-threatening. It is the most prevalent emergency during early pregnancy and is connected with a high incidence of maternal morbidity and mortality globally. The objective of this study is to analyze the risk factors and outcomes of ectopic pregnancies at Ladoke Akintola University of Technology (LAUTECH) Teaching Hospital, located in Ogbomoso, Southwestern Nigeria, over a period of five years. This study is a retrospective analysis of women who were admitted and treated for ectopic pregnancy at LAUTECH Teaching Hospital, Ogbomoso, between January 1, 2016, and December 31, 2020. Sociology-demographic variables, risk factors, clinical features, postoperative outcomes, and duration of hospital stay were obtained from medical records using a structured proforma. Data were analyzed with IBM SPSS version 24 to compute frequencies, percentages, means and inferential statistics for hypothesis testing. The occurrence of ectopic pregnancy accounted for 5.23% of all admissions related to gynecological issues, with an incidence rate of 1.68%. The patients' mean age was 29.84. The most often reported symptom was amenorrhea, with a prevalence of 100%. This was followed in sequence by abdominal pain (96.4%), dizziness (80.9%), fainting attack (60.9%), and shoulder tip discomfort (60%). The most prevalent risk factors observed were pelvic inflammatory disease (61.8%), prior abdominal surgery (43.6%), patient's number of previous pregnancies (41.8%), and history of induced abortion (38.2%). There were no deaths registered. The most often encountered complication was hypovolemic shock. Ectopic pregnancy is still a serious reproductive health issue for women in this region, serving as one of the primary causes of maternal morbidity throughout the early stages of pregnancy. To effectively address the increasing problem of pelvic inflammatory disease and unwanted pregnancy in this specific area, it is crucial to intensify efforts in promoting reproductive health advocacy initiatives.

Keywords: Ectopic Pregnancy, Risk Factors, Outcome, Gynaecological Emergencies.

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INTRODUCTION

Ectopic pregnancy is a prevalent gynecological ailment that poses a significant risk to the mother's life during early pregnancy. It is not limited to any specific race and is associated with a high rate of maternal illness and death (1). An ectopic pregnancy is characterized by the implantation of the fertilized ovum or blastocyst outside of the uterine cavity (1). An ectopic pregnancy occurs when the fertilized egg implants and develops outside the normal location in the uterus, leading to the death of the fetus.

The prevalence of ectopic pregnancy differs throughout countries and within the same geographic area, depending on the specific risk factors present in the population. The global incidence of ectopic pregnancy is increasing due to several factors, such as the high prevalence of sexually transmitted infections (STIs), post-abortion sepsis, puerperal sepsis, assisted reproductive technology, and improved access to diagnostic facilities, which allows for the detection of ectopic pregnancy cases that may have otherwise gone unnoticed. In the United Kingdom, the occurrence rate of this condition is reported to be 11 occurrences per 1000 pregnancies (3). In Nigeria, the occurrence rate of this condition during delivery is estimated to be between 1.1% and 3.8%. The prevalence rate in Benin is 0.86%, in Sokoto it is 1.5%, in Lagos it is 2.2%, and in Port Harcourt, it is 3.3%.

The prevalence of ectopic pregnancy has been rising in recent decades. Several Chinese research have shown a clear correlation between the increase in Ectopic Pregnancy cases and the growth in Pelvic inflammatory disease incidence (8). Additional factors that have been linked to ectopic pregnancy include a previous ectopic pregnancy, past tubal surgery, confirmed tubal abnormalities, a history of infertility, smoking, assisted reproduction technologies (ARTs), multiple sexual partners, advanced maternal age, and exposure to in-utero diethylstilbestrol (DES) (9-11).

Several meta-analyses have indicated that in cases of contraceptive failure, the use of oral contraceptive pills (OCPs), intrauterine devices (IUDs), and female sterilization can lead to an increased risk of ectopic pregnancy, although the degree of risk varies (12). Nevertheless, a multicenter study conducted by Jian Zhang et al. has shown that there have been ongoing reports of ectopic pregnancy (EP) cases resulting from levonorgestrel emergency contraception (LNG-EC) failure. However, it remains uncertain whether there is a direct link between the risk of ectopic pregnancy and the use of LNG-emergency contraception (12). In recent decades, there has been a rise in the occurrence of ectopic pregnancy due to an increasing and ongoing exposure to its risk factors. This can be related to a deficiency in sufficient understanding of the risk factors associated with ectopic pregnancy and the failure to avoid these risks. (13) The three main symptoms are absence of menstrual periods, discomfort in the lower abdomen, and bleeding from the vagina. These symptoms may also be accompanied by fainting, a sudden drop in blood pressure, and pain in the shoulder tip. These symptoms occur because there is a large amount of blood in the abdomen, which irritates the diaphragm. (14) In the United Kingdom, this presentation is relatively uncommon because ectopic pregnancies are detected at an earlier stage. However, in this sub-region and other poor nations, most patients still come with ruptured ectopic pregnancies and a state of hemodynamic imbalance.

The significance of ectopic pregnancy in our surroundings stems from the fact that, although developed countries commonly employ early diagnosis and conservative treatment, we continue to face the difficulty of late presentations with ruptured ectopic pregnancies in over 80% of instances (15).

Early detection of Ectopic Pregnancy is now feasible by a range of procedures, including transvaginal ultrasonography, quantitative measurement of the β subunit of human chorionic gonadotropin (β-hCG), and laparoscopy. The coordinates are (16, 17). Delayed diagnosis frequently results in significant consequences such as rupture and hemoperitoneum, necessitating surgical intervention through laparotomy and salpingectomy.

Salpingectomy should be provided to women who are undergoing surgery for an ectopic pregnancy unless they possess other risk factors for infertility. Salpingectomy is indicated for cases of recurrent ectopic pregnancy in the same Fallopian tube, severe damage to the affected tube, uncontrollable hemorrhage, or for women who have finished having children (18). Salpingotomy is the preferable procedure for women who do not have a healthy tube on the other side (18). Women undergoing a salpingotomy should be advised that there is a possibility that up to 20% of them may require further treatment. This treatment may involve the administration of methotrexate and/or the surgical removal of the fallopian tube (salpingectomy) (19). Women who have

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undergone a salpingotomy should have their serum hCG levels measured once, 7 days following the procedure. Subsequently, serum hCG levels should be measured weekly until a negative result is achieved. It is recommended that women who have undergone a salpingectomy should get a urine pregnancy test three weeks after the procedure. Encourage women to seek additional evaluation if the test results are positive (20)

Before the late 20th century, all surgical procedures related to gynecology, reproduction, and the fallopian tubes were conducted by making an incision in the belly, a procedure known as "laparotomy." Typically, women would spend 2 to 5 days in the hospital after surgery and resume work within 2 to 6 weeks, depending on the kind of physical exertion involved. Currently, a significant number of these procedures can be carried out using "laparoscopy," which involves making a tiny cut in the skin. After undergoing laparoscopy, women typically have the option to be discharged on the same day as the operation and experience a faster recovery, being able to resume normal activities within a period of 3 to 7 days (21).

Although laparoscopy offers numerous benefits, it is not universally applicable to all ectopic pregnancy procedures. Immediate laparotomy may be necessary for emergencies with significant internal bleeding or substantial intra-abdominal adhesions (21).

Ectopic pregnancy (EP) is the primary factor leading to maternal mortality in the initial trimester of pregnancy and is responsible for roughly 10% of all deaths due to pregnancy (22). In Africa and other underdeveloped nations, where the majority of women typically arrive at the stage of rupture (with an unstable hemodynamic condition), it is a significant factor contributing to maternal mortality. In Ghana, 8.7% of maternal deaths were attributed to Ectopic Pregnancy, with a total of 23 cases. According to recent reports, Cameroon accounted for 12.5% of maternal deaths, which amounted to 17 cases. Olamijulo et al. found a case fatality rate of 1.4% in Lagos, Nigeria (6). The reported percentage is significantly greater than the one documented in research conducted in Washington, USA (0.16%). The number is 24.

MATERIALS AND METHODS

Study Location: The research was carried out at LAUTECH Teaching Hospital, located in Ogbomoso, South-Western Nigeria. This hospital is a tertiary health facility owned by the state government and was created in 2011. The facility accepts referrals from general hospitals, mission hospitals, primary health centers, as well as privately owned hospitals and clinics located within the Ogbomoso region. Additionally, it receives referrals from neighboring states including Kwara, Osun, Ogun, and Lagos State.

Study Design: This is a 5-years descriptive retrospective study

Study population: This encompasses all instances of Ectopic Pregnancies that were handled at LAUTECH Teaching, Ogbomoso, between January 1, 2016, and December 31, 2020. During this period, a total of 130 cases of ectopic pregnancies were treated.

Inclusion Criteria: All properly completed cases managed during this period, a total of one hundred and ten (110) case notes were properly completed same utilized for the study.

Exclusion Criteria: Not properly completed case note.

Data collection: A formal written request, accompanied by ethical permission, was sent to the central record department where comprehensive information on all patients treated at the hospital was held. The hospital sought and utilized the hospital number of all patients treated for ectopic gestation between January 1, 2016, and December 31, 2020, to retrieve the patient's case file from the central records department.

Information on the diagnosis, socio-demographic parameters (such as age, parity, marital status, occupation, educational status, and religion), risk factors for ectopic pregnancy, clinical aspects of ectopic pregnancy, interventions, and complications were collected and recorded in the pro forma.

Data Management and Analysis

Information was obtained from the patient's case file. The pro forma documents were organized and inputted into a computer system. The resulting data was then analyzed using IBM Statistical Product and Service Solutions (SPSS) version 24. The gathered information underwent statistical analysis, and the results were presented in percentages, standard deviation, and inferential statistics. The chi-square test was employed for comparison; however, Fischer's exact test was utilized in cases when cells had anticipated values below five. The level of significance was established at a p-value below 0.05. The yearly prevalence of ectopic pregnancy was calculated by dividing the number of ectopic pregnancies for a given year by the annual deliveries for that year, acquired from the annual delivery register, and expressing the result as a percentage. The annual prevalence is calculated by dividing

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the number of ectopic pregnancies by the number of deliveries and then multiplying by 100. Frequency distribution tables and/or charts were created based on the variables or findings acquired.

Ethical considerations: Before retrieving data from the patient's medical records, ethical approval was acquired from the ethical review committee of LAUTECH Teaching Hospital, Ogbomoso. Patient case files were handled with strict confidentiality.

Number of ethical clearance certificates: ***LTH/OGB/EC/2021/257***

RESULTS

Prevalence of Ectopic Pregnancy at LAUTECH Teaching Hospital, Ogbomoso

During the specified time frame, LAUTECH Teaching Hospital in Ogbomoso handled a total of 130 instances of ectopic pregnancies. This accounted for 5.23% of the total 2,482 gynecological diseases treated during this time frame. Out of a total of 110 case notes, all of them were completed correctly and successfully retrieved, resulting in a recovery rate of 84.61%. During the period being examined, there were a total of 6,544 deliveries. Among these deliveries, the occurrence of ectopic pregnancy was found to be 1.68%.

Patients' Sociology-demographic characteristics

Table 1 reveals that a significant proportion of the patients (48.2%) were within the age bracket of 25-29 years, with an average age of 29.84 years. The majority of patients (61.8%) identified as Christian and had attained at least a primary level of education. A little below-average proportion of patients (49.1%) were unemployed. The percentage of married individuals who were above average was 54.5%, and they had an estimated gestational age (EGA) of 7-10 weeks.

Risk factors for Ectopic Pregnancy at LAUTECH Teaching Hospital, Ogbomoso

The most prevalent risk factors observed were pelvic inflammatory disease (PID) at a rate of 61.8%, previous abdominal surgery at a rate of 43.6%, patient parity at a rate of 41.8%, and previous induced abortion at a rate of 38.2%, as indicated in Table 2. Approximately 77.3% of individuals have utilized at least one type of contraception, however only 17.3% are presently using contraceptives. There was no statistically significant correlation observed between particular risk variables and the location of ectopic pregnancy. The p-value, which is less than 0.05, is displayed in Table 3.

Clinical Presentations of Patients Presenting with Ectopic Pregnancy at LAUTECH Teaching Hospital, Ogbomoso

The most often reported symptom was amenorrhea, with a prevalence of 100%. This was followed in sequence by abdominal pain (96.4%), dizziness (80.9%), fainting attack (60.9%), and shoulder tip discomfort (60%). The observed signs were abdominal tenderness (97.3%), guarding (92.7%), pallor (73.6%), rebound tenderness (72.7%), cervical excitation tenderness, and tachycardia (67.3%), as shown in Table 4. Figure 1 shows that the majority of patients, specifically 86 (78.3%), had a ruptured ectopic pregnancy. The right fallopian tube accounted for the bulk of the ectopic gestation cases (72.7%), whereas significantly less than one-third were detected in the left fallopian tube. The most frequent location for tubal ectopic pregnancy was the ampulla, accounting for 91 cases (82.7%). This was followed by the isthmus with 9 cases (8.2%), the Cornus with 6 cases (5.5%), and the fimbrial end with 4 cases (3.6%), as seen in Table 5.

Management strategies for patients presenting with ectopic pregnancy at LAUTECH Teaching Hospital, Ogbomoso: Salpingectomy was performed majorly (87.3%) for most of the ectopic gestation while few (12.7%) had salpingotomy as in table 6

Outcome of the Management Strategies of Patients with Ectopic Pregnancy at LAUTECH Teaching Hospital, Ogbomoso: Table 7 displays the length of time patients were in the hospital while being treated for ectopic pregnancy. The majority (92.7%) of patients were discharged on or before the seventh day after their surgery, while less than one-tenth (7.3%) stayed in the hospital for longer than seven days after the surgery. A majority of the patients (52.7%) experienced some form of complication, with hypovolemic shock being the most common (42.7% of patients). This required blood transfusion, with approximately 10.9% of patients receiving massive blood transfusions. Additionally, 17.3% of patients experienced renal failure, and 2.7% had cardiopulmonary arrest, as shown in Table 8.

DISCUSSIONS

Ectopic pregnancy is a significant gynecological emergency. In this study, the occurrence of ectopic pregnancy was found to be 1.68% of the total number of deliveries. This percentage is comparable to the findings of Panti et al in Sokoto (1.5%), but slightly higher than the reported incidence in Nnewi (1.31%). However, it is lower than the incidence recorded in

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Lagos, South-west, Nigeria (2.2%). The user's text consists of the number 6. The higher occurrence of ectopic pregnancy in developing nations can be linked to the rising incidence of inadequately managed pelvic inflammatory diseases resulting from sexually transmitted infections, unsafe abortion practices, and puerperal infections stemming from unsupervised home births and traditional birthing facilities (15).

In this study, respondents in the 25-29 age group had the highest occurrence of ectopic pregnancy, with an average age of 29.84 years. This finding aligns with reports from Lagos and indicates that this age range correlates to the period of reproductive capability and peak sexual activity.

Ectopic pregnancy is predominantly observed in multiparous women (54.5%). This is likely due to the combined impact of risk factors such as prior pelvic surgeries, unsafe abortions for unwanted pregnancies, and puerperal sepsis, which increase their susceptibility to ectopic gestation in future pregnancies.

The most prevalent risk factors identified in this study were a prior history of pelvic inflammatory disease (PID) (61.8%), previous abdominal surgery (43.6%), higher number of pregnancies (41.8%), and previous induced abortion (38.2%). A previous induced abortion is a substantial risk factor for ectopic pregnancy, with a prevalence of 38.2%. These results align with the findings of Okoro in Benin, located in the south-south region of Nigeria. The primary risk factors associated with ectopic pregnancy were a previous history of miscarriage (68.70%) and pelvic infection (44.35%) (4). This may be linked to the prevalent risky sexual behaviors in this region, unsafe abortion practices, lack of liberalization of abortion, restrictive abortion laws, and poor socio-economic conditions in Nigeria (2). In modern nations, where abortion is legally permitted and conducted in sanitary settings by a proficient individual, the likelihood of experiencing an ectopic pregnancy as a result of an induced abortion is extremely low (26).

Within this study, around 77.3% of participants reported using some kind of contraceptive, but a minority of individuals (17.3%) who were currently using contraception had pregnancy while utilizing their preferred method. Contraceptive methods that enhance the likelihood of ectopic pregnancy after contraceptive failure have been identified as a contributing factor to the rising prevalence of ectopic pregnancy (4).

Some previous studies based on Meta-analysis revealed that female sterilization, intrauterine devices (IUDs) and oral contraceptive pills (OCPs) have a high potential to increase risks of ectopic pregnancy to varying extents in circumstances where contraception fails. However, the use of condoms is not linked to an elevated risk (12). At the time of presentation, the prevalence of intrauterine contraceptive devices (IUCD) among the patients was 12.7%, which exceeded the rate reported in research conducted in Kano, Nigeria (26). Approximately 39.1% of the female individuals were using contraceptives that included progesterone at the time of their presentation.

Our study identified smoking at the time of conception as another independent risk that is linked to ectopic pregnancy. Among the patients treated for ectopic pregnancy, 1.8% were found to be smokers. This aligns with research conducted in other regions of the globe (27). Smoking is believed to increase the likelihood of ectopic pregnancy in women by modifying the expression of PROKR1 in the fallopian tubes, which leads to alterations in their function. Hence, it is imperative to raise women's awareness of the hazards of smoking and to promote their efforts in avoiding and quitting smoking.

While the majority of risk variables were observed among married patients, a notable proportion of risks were also found among unmarried individuals and those living together. This supports the findings of a hospital study conducted by Urge et al in southwest Ethiopia (28) but differs from the findings reported by Esu et al in Calabar, Nigeria (29).

The age group of 25-34 years exhibited the highest prevalence of risk variables linked to ectopic pregnancy. Furthermore, a significant statistical correlation was seen between particular risk factors for ectopic pregnancy and the age group of the patient. The p-value is less than 0.05. This is because this age group aligns with the period during which most women engage in sexual activity and reproduction.

The most prevalent symptom seen in this study was amenorrhea, affecting 100% of the participants. This was followed in sequence by abdominal pain (96.4%), dizziness (80.9%), fainting attack (60.9%), and shoulder tip discomfort (60%). This supports the findings published by Ayyuba and Hadiza in Kano, Nigeria (26). The most often observed signs in this investigation were abdominal discomfort (97.3%), guarding (92.7%), pallor (73.6%), rebound tenderness (72.7%), cervical excitation tenderness, and tachycardia (67.3%).

The majority of patients with a ruptured ectopic pregnancy

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underwent unilateral salpingectomy due to significant tubal damage. Only a small proportion, approximately 12.7%, had linear salpingotomy. These individuals were nulliparous and had an ectopic pregnancy that had not yet burst. The factors that were taken into account while deciding on surgical intervention for ectopic pregnancy included the patient's hemodynamic status, the condition of the contra-lateral tube in women who still wanted to get pregnant, and the severity of the injury or whether the ectopic pregnancy had ruptured (19).

In this investigation, the right tube was implicated in 72.7% of patients. This occurrence was related to the existence of an appendix that had perhaps experienced previous sub-acute inflammation (1). The ampulla was identified as the predominant location (82.70%) for tubal pregnancy, while the fimbria (3.6%) was the least frequently observed site.

The vast majority (92.7%) of patients treated for ectopic pregnancy were discharged within seven days after the operation, whereas less than one-tenth (7.3%) required a longer hospital stay beyond seven days. The average length of hospitalization was 6.28 days. This can be ascribed to the minimal incidence of postoperative complications among our patients.

The study identified several problems, including hypovolemic shock (42.7%), which required blood transfusion. Of those transfusions, approximately 10.9% were classified as major blood transfusions. Additionally, 17.3% of patients experienced renal failure, and 2.7% suffered cardiac arrest. There were no deaths among the patients treated for ectopic pregnancy over the years examined at this clinic.

CONCLUSION

Ectopic pregnancy is a gynecological disorder that is linked to higher rates of maternal morbidity at LAUTECH Teaching Hospital, Ogbomoso. To prevent this threat, providing health education about the elements that increase the risk, maintaining a high level of suspicion, and utilizing advanced diagnostic procedures can help in identifying the problem early, ensuring timely treatment, and facilitating appropriate referrals. All women should be offered an early transvaginal ultrasound for prompt diagnosis. Implementing health education, promoting widespread use of contraceptives, encouraging safer sexual practices, and relaxing abortion laws in Nigeria could effectively combat this problem

REFERENCE

1. Jurvic D. Ectopic pregnancy. In: Edmonds K, editor. Dewhurst's textbook of obstetrics and gynecology. 8th ed. UK: Wiley-Blackwell, UK; 2012. pp. 76–87.
2. Lawani O.L, Anozie O.B, Ezeonu P.O. Ectopic pregnancy: A life-threatening gynecological emergency. Int J Womens Health 2013;5:515-21
3. Cantwell R, Clutton-Brock T, Cooper G, Dawson A, Drife J, Garrod D, et al. Saving mothers' lives: reviewing maternal deaths to make motherhood safer: 2006–2008. BJOG 2011; 118:1–203.
4. Okoror C.E, Uhunmwangho B.O, Idemudia O. Ectopic pregnancy at a teaching hospital, Nigeria: an analysis of presentation and risk factors. Menoufia Med J 2020; 33: 415-8.
5. Panti A, Tanko B, Yakubu A, Egondu S, Ikechukwu N, Lukman O. Ectopic pregnancy at Usmanu Danfodiyo University Teaching Hospital Sokoto: a ten-year review. Ann Niger Med 2012; 6:87.
6. Olamijulo J.A, Okusanya B.O, Adenekan M.A, Ugwu A.O, Olorunfemi G, Okojie O. Ectopic pregnancy at the Lagos University Teaching Hospital, Lagos, South-Western Nigeria: Temporal trends, clinical presentation and management outcomes from 2005 to 2014. Niger Postgrad Med J 2020; 27:177-83.
7. Celestine O.J, Justina O.A, Ectopic Pregnancy Experience in A Tertiary Health Facility in South-South Nigeria, TNJH, vol 16, no 1 (2016).
8. Kamwendo F, Forslin L, Bodin L, Danielson D. Epidemiology of ectopic pregnancy during 28 years and the role of pelvic inflammatory disease. Sex Trans Inf. 2000 Feb; 76(1):28–32. 15.
9. Ankum W.M, Mol B.W, Van der Veen F, Bossuyt P.M. Risk factors for ectopic pregnancy: a meta-analysis. Fertil Steril. 1996 Jun; 65(6):1093–9. PMID: 8641479 18.
10. Bouyer J, Coste J, Shojaei T, Pouly J.L, Fernandez H, Gerbaud L, et al. Risk factors for ectopic pregnancy: a comprehensive analysis based on a large case-control, population-based study in France. Am J Epidemiol. 2003 Feb 1; 157(3):185–94. PMID: 12543617 20.
11. Li C, Zhao W.H, Zhu Q, Cao S.J, Ping H, Xi X, et al. Risk factors for ectopic pregnancy: a multi-center case-control study. BMC Pregnancy Childbirth.

2015 Aug 22; 15:187. https://doi.org/10.1186/s12884- 015-0613-1 PMID: 26296545 21.
12. Zhang J, Li C, Zhao W, Xi X, Cao S, Ping H, et al. Association between levonorgestrel emergency contraception and the risk of ectopic pregnancy: a multicenter case-control study. Sci Rep. 2015 Feb 12; 5:8487. https://doi.org/10.1038/srep08487 PMID: 25674909.
13. Nama, V. & Manyonda, I. Tubal ectopic pregnancy: diagnosis and management. Arch Gynecol Obstet 279, 443 (2010).
14. Emma Kirk Tom Bourne. Ectopic pregnancy. Obstetrics, Gynaecology and Reproductive Medicine. Int. J. Obst. & Gynaecol. Elsevier Ltd. 21:7; 207. 2011
15. Abbas A, Akram H. Ectopic pregnancy: Audit at Maula Teaching Hospital Sagodha Professional. Med J 2011; 18:24-7.
16. Goyaux N, Leke R, Keita N, Tonneau P. Ectopic pregnancy in African developing countries. Acta Obstet Gynecol Scand. 2003 Apr; 82(4):305–12. PMID: 12716313
17. Tebeu P, Halle-Ekane G, Da Itambi M, Enow Mbu R, Mawamba Y, Fomulu J. Maternal mortality in Cameroon: a university teaching hospital report. Pan Afr Med J. 2015 May 7; 21(16).
18. Fernandez H, Capmas P, Lucot J.P, Resch B, Panel P and Bouyer J for the GROG (Research Group in Obstetrics & Gynaecology) (2013). Fertility after ectopic pregnancy: the DEMETER randomized trial. Human Reproduction, 28 (5), 1247- 1253.
19. National Institute for Clinical Excellence, NICE (2012). Ectopic pregnancy and miscarriage: diagnosis and initial management in early pregnancy of ectopic pregnancy and miscarriage. Clinical Guideline No. 154. Manchester: NICE.
20. Royal College of Obstetricians and Gynaecologists, RCOG (2010). The management of tubal pregnancy. Clinical Guideline No. 21 (revised). London: RCOG Press.
21. Patient Education Committee and the Publications Committee. The American Society for Reproductive Medicine. Pub 2014 pg 1-3
22. Say L, Chou D, Gemmill A, Tunçalp Ö, Moller A, Daniels J, et al. Global causes of maternal death: a WHO systematic analysis. Lancet Glob Health. 2014; 2(6):323–33.
23. Tebeu P, Halle-Ekane G, Da Itambi M, Enow Mbu R, Mawamba Y and Fomulu J. Maternal mortality in Cameroon: a university teaching hospital report. Pan Afr Med J. 2015 May 7; 21(16).
24. Lisonkova S, Tan J, Wen Q, Abdellatif L, Richter L.L, Alfaraj S, et al. Temporal trends in severe morbidity and mortality associated with ectopic pregnancy requiring hospitalization in Washington State, USA: A population-based study. BMJ Open 2019; 9: E024353.
25. Udigwe G.O, Umeonihu O.S, Mbuchu I.I. Ectopic pregnancy: A 5-year review of cases at Nnamdi Azikiwe University Teaching Hospital (NAUTH) Nnewi. Niger Med J 2010;51:160-3
26. Ayyuba R, Galadanci H.S. Risk Factors and Outcomes of Ectopic Pregnancies at Aminu Kano Teaching Hospital, Kano, Nigeria. Trop J Obstet Gynaecol, 30 (2), August 2013
27. Shaw L, Oliver E, Lee K, Critchley H, Horne A. Cotinine Exposure Increases Fallopian Tube PROKR1 Expression via Nicotinic AChR-7 A Potential Mechanism Explaining the Link between Smoking and Tubal Ectopic Pregnancy. Am J Pathol. 2010 Nov; 177(5):2509–15.
28. Urge G, Tilahun A., Amenu. D, Determinants of ectopic pregnancy among pregnant women attending referral hospitals in the southwestern part of Oromia, Southwest Ethiopia. BMC Pregnancy Childbirth. 2021;21:130
29. Esu E.B, Okpon E.l. Knowledges in Southwestern Nigeria. Calabar J Health Sci. 2020;4(1):8-12

TABLE AND FIGURE

Table 1: The Socio-Demographic Characteristics of Patients

Variable	Frequency (n)	Percentage (%)
Age Range in Years		
14-19	1	9
20-24	2	1.8
25-29	53	48.2
30-34	41	37.3
35-39	10	9.1
40-44	3	2.7
Marital Status		
Single	29	26.4
Married	60	54.5
Cohabiting	21	19.1
Level of Education		
Primary	9	8.2
Secondary	35	31.8
Tertiary	43	39.1
No Formal Education	23	20.1
Religion		
Christianity	68	61.8
Islam	42	38.2
Professional Category		
Skilled	11	10.0
Unskilled	45	40.0
Unemployed	54	49.1
Gestational Age in weeks		
4-6	25	22.7
7-11	65	59.1
11-14	10	9.1
Unsure	10	9.1

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Table 2: Risk Factors for Ectopic Pregnancy at LAUTECH Teaching Hospital, Ogbomoso

Risk Factors	Frequency (n)	Percentage (%)
Smoking	2	1.8
Previous Miscarriage	37	33.6
Prior Induced Abortion	42	38.2
Parity of Patient	46	41.8
Previous Tubal Surgery	2	1.8
Previous Pelvic Surgery	32	29.1
Previous Abdominal Surgery	48	43.6
Prior Chlamydia Infection	26	23.6
Prior PID	68	61.8
Prior Ectopic Pregnancy	9	8.2
Prior Endometriosis	3	2.7
IUCD	14	12.7
COOP	28	25.5
POPs	33	30
Injectables	8	7.3
Implants	2	1.8

TABLE 3: Relationship between Some Risk Factors and Site of Ectopic Pregnancy

Risk Factors	Right Fallopian Tube	Left Fallopian Tube	P-Value
Pops	26	7	0.244
Prior PID	49	19	0.511
Prior Chlamydia	21	5	0.214
Smoking	1	1	0.473
Endometriosis	3	0	0.304

Significant: $P < 0.05$

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Table 4: Clinical Presentations of Patients Presenting with Ectopic Pregnancy at LAUTECH Teaching Hospital, Ogbomoso.

Variables	Frequency (n)	Percentage (%)
SYMPTOMS		
Amenorrhea	110	100
Abdominal Pain	106	96.4
Abdominal swelling	51	46.4
Dizziness	89	80.9
Fainting Attack	67	60.9
Shoulder tip Pain	66	60
SIGNS		
Abdominal Tenderness	107	97.3
Guarding	102	92.7
Rebound Tenderness	80	72.7
Tachycardia	74	67.3
Pallor	81	73.6
Shock	51	46.4
CET	78	70.9
Bugginess of POD	70	63.6
Adnexal Mass	23	20.9

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Table 5: Site of Tubal Ectopic Pregnancy

Variables	Frequency	Percentage
Ampulla	91	82.7
Isthmus	9	8.2
Cornual	6	5.5
Fimbrial End	4	3.6

Table 6: Surgical Procedure Performed for Ectopic Pregnancies

Variables	Frequency	Percentage
Total Salpingectomy	64	58.2
Partial Salpingectomy	32	29.1
Salpingotomy	14	12.7

Table 7: Duration of Hospital Stay of Patients Managed with Ectopic Pregnancy

VARIABLE	FREQUENCY	PERCENTAGE
5	22	20.0
6	46	41.8
7	34	30.9
8	5	4.5
9	3	2.8

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Table 8: Complications of Ectopic Pregnancy at LAUTECH Teaching Hospital, Ogbomoso

Variable	Frequency (n)	Percentage (%)
Massive Blood Transfusion	12	10.9
Hypovolemic Shock	47	42.7
Renal Failure	19	17.3
Cardiopulmonary Arrest	3	2.7
No Complication	52	47.3

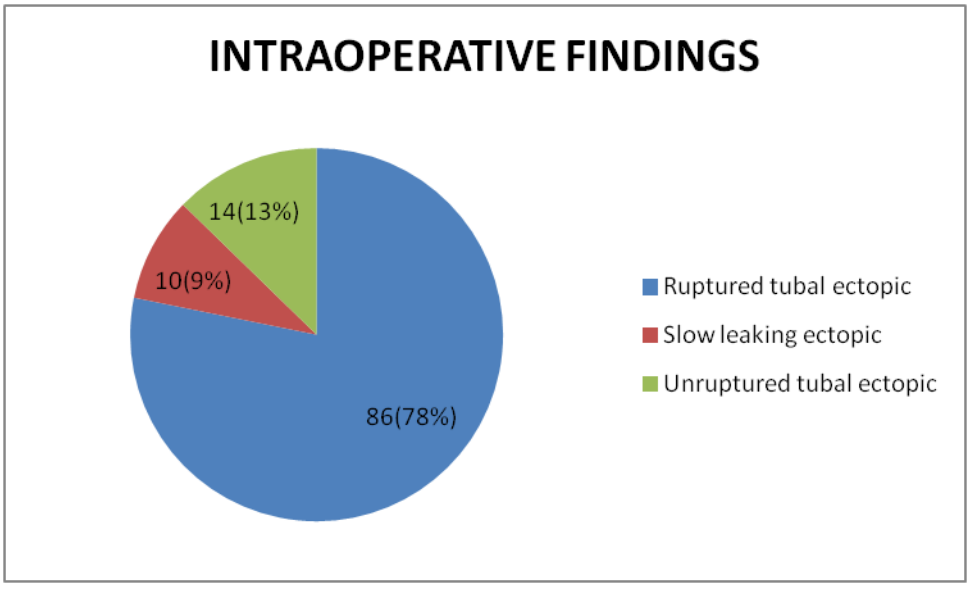

Figure 1: Pie Chart Showing Intra-Operative Finding of Ectopic Pregnancy Managed.