ECTOPIC PREGNANCY IN BAUCHI, NORTH-EAST NIGERIA

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ABSTRACT

Background: Ectopic pregnancy is an important life-threatening emergency and a cause of reproductive morbidity and mortality especially in developing countries. The significance of ectopic pregnancy in our environment lies in its late presentations with its attendant consequences compounded by structurally weak health systems. This is at variance with the global trend of early diagnosis and conservative approach to this condition.

Objective: To assess the incidence, presentation and management of ectopic pregnancy (EP), in Bauchi north-east Nigeria over a two-year period.

Methods: This was a retrospective study of cases of EP managed at gynaecological unit of Abubakar Tafawa Balewa University Teaching Hospital (ATBUTH) Bauchi between 1st of January 2009 and 31st December 2010.

Results: During the period under review, a total of 19,412 deliveries were recorded in the hospital and 119 ectopic pregnancies were managed. This gives an incidence of 0.61%. Majority of the patients were 30 years and below with mean age of 26.8 years. The common clinical features at presentation were abdominal pain (95%), amenorrhea (87%), vaginal bleeding (51.5%). More than half of the patients were in shock (51.4%) before intervention. Seventy patients (69%) had the EP on the right tube, 10(9.9%) on the left tube while the side was not stated in 20 patients (20.8%). The mode of surgical treatment in majority of the patients was unilateral salpingectomy 83(82.2%); one patient (1%) had bilateral salpingectomy while the type of surgical operation was not stated in 13 cases (12.9%). None of the patients had minimal access surgery, medical or conservative management. Anaemia (65.3%) was the commonest post-operative complication. Case fatality was 4%.

Conclusion: Late presentation of EP was the commonest way of presentation in our centre. Laparotomy with salpingectomy was the main modality of management. This has adverse effect in a society which places high premium on child bearing. Reproductive health education and strengthening support services like blood transfusion services are needed. Provision of minimal access approach facilities and other forms of conservative management for those that present early should be considered.

Keywords: Ectopic pregnancy, incidence, presentation and management at a newly established teaching hospital, Nigeria

INTRODUCTION

Ectopic pregnancy (EP) is an important life-threatening emergency and a cause of

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reproductive morbidity and mortality especially in developing countries[1]. It remains a major cause of reproductive failure worldwide[2,3].

The incidence of EP varies widely from place to place even though different denominators are used in calculating the rates. The rates are said to have been rising in most countries[3,4]. This has been attributed to increase in pelvic infections, advances in diagnostic technology, tubal sterilizations and use of assisted reproductive technology[5].

In Europe and North America the incidence rate is estimated at between 2 and 2.5 % of live births[3,4]. In developing countries it ranges from 0.5% to 3% per total deliveries reported from different countries[6,7]. In Nigeria, various centres have reported figures such as 1.17% in kano,1.81% in Sokoto,2.31% in Lagos, Nnewi has 1.3%, 1.74 % in Jos and 1.68% in Benin[8,9,10,11]. An increase from 0.9% to 1.4% was noted in Ilorin over a decade[12].

While the global trend is that of early diagnosis and more conservative management techniques, the picture in the developing countries is that of late presentation, rupture with associated haemodynamic instability and radical surgery[1,3,13]. Weak health systems as evidenced by poor diagnostic tools, limited capacity to handle emergencies and poor referral linkages all conspire to ensure high morbidity and mortality in this part of the world[1].

A number of risk factors for EP have been well documented but a high index of suspicion is required for early diagnosis[9,14]. Pelvic infections from sexually transmitted infections, post abortal and puerperal sepsis are common and also preventable[5,11,15,].

Management of EP can be expectant, medical or surgical. It is dependent on the clinical presentation of the patient, site and available technology at the facility[15,16,17]. Randomized studies have demonstrated the advantages of laparoscopy over Laparotomy for treatment of EP[2,3]. While laparoscopic procedures occupy preeminent place in the developed countries, radical open surgical procedures are the mainstay of management in our set up[13,18]. This is due to the late presentations, lack of modern technological facilities and skills for conservative management techniques.

Various incidence rates have been reported from many centres in Nigeria. There is no such data on the magnitude of this important gynaecological condition in Bauchi, north east Nigeria. There is the need for a baseline data on EP in this place so as to enable monitoring and evaluation of the trend in subsequent years to come. The aim of this study therefore, is to look at the incidence, presentation and management of EP in this newly upgraded hospital with a view to strategically plan in the service improvement of the institution.

MATERIALS AND METHODS

Study area

Bauchi is the capital city of Bauchi state located in north east Nigeria. The state has an estimated population of 5.6 million with a female population of 2.5 million, of which 1.7 million are in reproductive age group[19]. The city had a specialist hospital which has 500 beds capacity. It is the main referral centre serving the city and its surrounding local government areas. This hospital was taken over and upgraded to a teaching hospital in October 2010 by the Federal Government. Prior to the take-over, the Obstetrics and Gynaecology department was managed by complements of Medical Officers supplemented by visiting Consultants.

Methods

This was a retrospective review of EP at ATBUTH Bauchi between 1st January 2009 and 31st December 2010. The case notes were retrieved after getting the number of cases from gynaecological ward and theatre register. Total number of deliveries was obtained from the labour ward register. Information on biodata, clinical presentation, site and treatment offered were extracted. The data was analyzed using basic descriptive statistics with Epi info software (CDC version3.5.3).

RESULTS

During the 2-year period under review, a total of 19,412 deliveries were recorded in the hospital, 2013 gynaecological admissions and 119 ectopic pregnancies were managed. This gives an incidence of 0.61% for all deliveries and 5.9% of gynaecological admissions. Majority of the patients were 30 years and below with mean age of 26.8 years. The age distribution of the studied population is shown in table 1. The incidence was high in those of Para two and below 69(68.3%) and low in grandmultiparous women 6 (6%). The common clinical features at presentation were abdominal pain (95%), amenorrhea (87%), vaginal bleeding (51.5%) as shown in table 2. More than half of the patients were in shock (51.4%) before intervention. Seventy patients (69%) had the EP on the right tube, 10(9.9%) on the left tube while the side was not stated in 20 patients (20.8%).Seventy six (75.2%) were ampullary, 11(10.9) fimbrial, 9 (8.9%) were in the isthmus while site was not stated in 5(5%).

The mode of surgical treatment in majority of the patients was unilateral salpingectomy 83(82.2%); one patient (1%) had bilateral salpingectomy,4(4%)had unilateral salpingoophorectomy while the type of surgical operation was not stated in 13 cases (12.9%). More than two-third of the patients had blood transfusion. None of the patients had minimal access surgery, medical or conservative management.

Anaemia (65.3%) was the commonest post-operative complication while case fatality was recorded in 4(4%) patients. No histological confirmation was recorded in all the cases.

Table 1: *Demographic characteristics*

Variable	No	%
Age		
15-20	11	10.9
21-25	36	35.7
26-30	32	31.7
31-35	17	16.8
36-40	5	5.0
Parity		
0	22	21.8
1	21	20.8
2	26	25.7
3	19	18.8
4	7	6.9
5	6	6

Table 2: Clinical Symptoms at presentation

Symptoms	No	%
Abdominal pain	96	95
Amenorrhoea	88	87.1
Abnormal vaginal bleeding	52	51.5
Collapse	20	19.8
Features of s hock	52	51.4
Asymptomatic	3	3

Table 3 Treatment of EP

Procedure	No	%
Unilateral salpingectomy	83	82.2
Unilateral salpingo -oophorectomy	4	4
Bilateral salpingectomy	1	1
Not stated	13	12.9
Total	**101**	**100**

DISCUSSION

The incidence of EP in this study is 0.6% of all deliveries and 5.9% of gynaecological admissions. This incidence is lower than figures reported from other centers in Nigeria which include 0.9% in Ilorin,1.31% in Nnewi,1.17% in Kano, 1.68% in Benin,2.27% in Enugu,1.81 in Sokoto[8,9,10,11]. It is however similar to the 0.4% reported by the Indian multi-centre study of ectopic pregnancy and 0.58 % reported in Saudi Arabia. In America a figure of 2.2% of live births has been reported[6,7].

The rates in Nigeria are all hospital-based studies in urban areas and the peculiar characteristics of such hospitals may be responsible for the variation. Whether the difference between developed and developing countries is real or spurious is difficult to tell. Comparison is difficult due to different denominators being used[3,9]. Cultural reasons that discourage autopsy may suggest that some of the many women who presented with abdominal pain in many facilities may die with EP undiagnosed and hospital delivery itself is still low in Nigeria. All these may account for the apparent low rate of EP in developing countries[9]. Better diagnostic facilities may account for the noted high figures in developed countries.

In this review, over 78% of the patients were 30 years and below and were mainly of low parity. This is comparable to the findings noted in Ilorin, Kano and Benin[10,12]. This revealed that the emotional and physical burden of reproductive failure is mainly on those at the prime of the reproductive years. This is a significant burden in a society that placed high premium on childbearing.

Almost all the patients (95%) presented with history of abdominal pain in addition to bleeding per vaginum and history of amenorrhoea. This is similar to other reports from Nigerian cities[8,9,11,]. Of significant note in this series is the findings of more than half of the patients were in shock before intervention. Health seeking behavior associated with ignorance and poverty may have contributed to this presentation but institutional factors (inadequate manpower, availability of consumables, equipment) may have also contributed in this series.

Most of the patients (87%) were aware of being pregnant at the time of presentation. It is imperative, therefore to evaluate history of amenorrhoea and abdominal pain with EP in mind. History of amenorrhoea, abdominal pain and syncopal attack seen in many of the patient in this study is the usual mode of presentation in developing countries where between 70 and 95% of cases may present as ruptured EP[9,13].

In addition to clinical presentation, simple tests like Urine pregnancy test and transabdominal ultrasonography were the investigation used in these patients. Transvaginal ultrasonography, serum BhCG and laparoscopy were either not available or not used in the management of the patients during the period under review.

The fallopian tube is the commonest site for EP. This is also the finding of this review where more than two-thirds of the patients had ampullary EP.It is comparable to other studies in Nigeria[10,11,12]. In as much as 5% of the patients, no site was recorded. This highlights the need for

proper documentation in operative notes.

All the patients had surgical treatment with majority having unilateral salpingectomy. This finding is similar to that of other studies in Nigeria and most of sub-saharan Africa[11,12,13]. It is in sharp contrast to the developed countries where conservative treatment either via minimal access surgery or medical means is the main modality[3]. Conservative treatment is superior to radical surgery in preserving fertility. Blood transfusion was done in two-thirds of the patients, however none had autologous transfusion. This is a method worth considering in management of EP in developing countries.

Unlike the studies in Nnewi and Makurdi which recorded no mortality, this series had a mortality of 4 %. This is higher than 1.5% in Sokoto and 1.9% in Ilorin,1.7% in Kano[8,9,12]. The difference in mortality could be due to the prompt attention obtainable in those teaching hospitals with full complements of staff and better equipment compared to this centre which was a State Government hospital during the period under review. Anaemia was the commonest post-operative complication. This was also the case in Nnewi[11].

EP is an important gynaecological cause of morbidity and mortality in Bauchi. Late presentation is the main mode of presentation with its attendant consequences. Lack of diagnostic and therapeutic facilities may have contributed to the high morbidity and mortality. Improvement in documentation and record keeping, liberal use of Ultrasound scanning in amenorrhoeic women, availability of consumables at emergency points should be considered. Medical practitioners need continuous update on the features of EP. Provision of Health education on reproductive health to the populace, new diagnostic tools & skills are needed to improve the management of EP in this newly established tertiary hospital.

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