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Case Report

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# Ruptured Tubal Stump Ectopic Pregnancy After Previous Ipsilateral Salpingectomy: a Case Report and Literature Review

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**Abstract**

*Ectopic pregnancy is life threatening condition occurring due to the implantation of fertilized ovum outside the uterine endometrial cavity. Its common site is fallopian tube. Stump ectopic pregnancy after previous salpingectomy on ipsilateral tube is the rare occurrence. We present a 26yrs old female patient with tubal stump ectopic pregnancy who was undergone salpingectomy on ipsilateral tube one year back. This is the first report from Ethiopia.*

**Keywords:** Ectopic Pregnancy, Stump Tubal Ectopic, Salpingectomy

## 1. Introduction

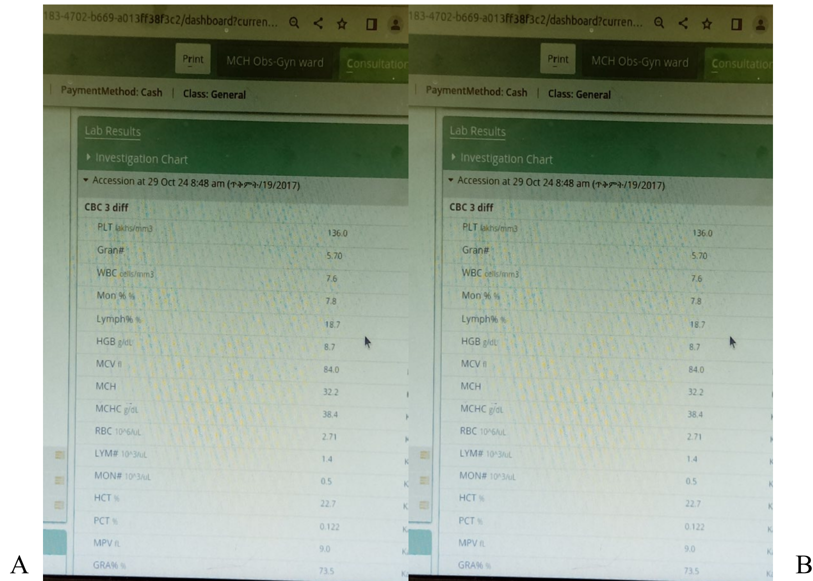
Ectopic pregnancy occurs when a fertilized ovum implants and grows outside the main cavity of the uterus. This mainly occurs in a fallopian tube, which carries eggs from the ovary to the uterus. Beside the tubes sometimes Ectopic pregnancy occurs in other areas of the body, such as ovary, abdominal cavity or cervix [1]. Epidemiologically ectopic pregnancy occurs in around 1-2% of all pregnancies. The incidence of recurrent ectopic pregnancy is approximately 15% after one ectopic pregnancy. WHO report shows that ectopic pregnancy is responsible for 4.9-6.1% of maternal mortality [2]. In our developing community where ultrasound imaging is scarce at the primary care unit, most of the time cases of ectopic pregnancies come late after rupture with hemodynamic unstable. By its nature ruptured ectopic pregnancy is a life threatening condition unless it is managed timely. Tubal Stump ectopic pregnancy after previous salpingectomy occurs when blastocyst implants within the remnants of the salpingectomized tube. It is the rarest form of ectopic pregnancy to occur. There are only few case reports available in literatures [3, 4]. There is no case report from Ethiopia found on the web yet. Here we present a case of ruptured ectopic pregnancy from leku general hospital Ethiopia in 26yrs old female who had history of ruptured ectopic pregnancy and undergone rt side salpingectomy 1yr back in the same hospital.

## 2. Case Presentation

This is 26yrs old para 1 and who had 1 history of ectopic pregnancy 1yr back for which she underwent salpingectomy. Currently she presented with history of sudden lower abdominal pain and 1 episode of vomiting. She was amenorrheic for last 5weeks and she used to see her menses regularly before she missed it lastly. She doesn't use any contraceptives. Upon presentation to the emergency room she was in shock with initial vital signs of BP=70/50mmhg,PR=120bpm,RR=22br/min,Pso2=96%.She was in pain, she has generalized lower abdominal tenderness, there was also cervical motion tenderness and cervix closed. Catching up this she was kept at emergency room with concomitant resuscitation and started to be investigated. Urine HCG comes with positive result, hgb=9.7gm/dl, PLT=153,000, WBC=15000(fig-1A). Bedside ultrasound imaging done and revealed empty uterus with free fluid massively in the culde sac and morisons pouch and there is extra ovarian hyperechoic collection adjacent to the uterine cornua (fig-2A).

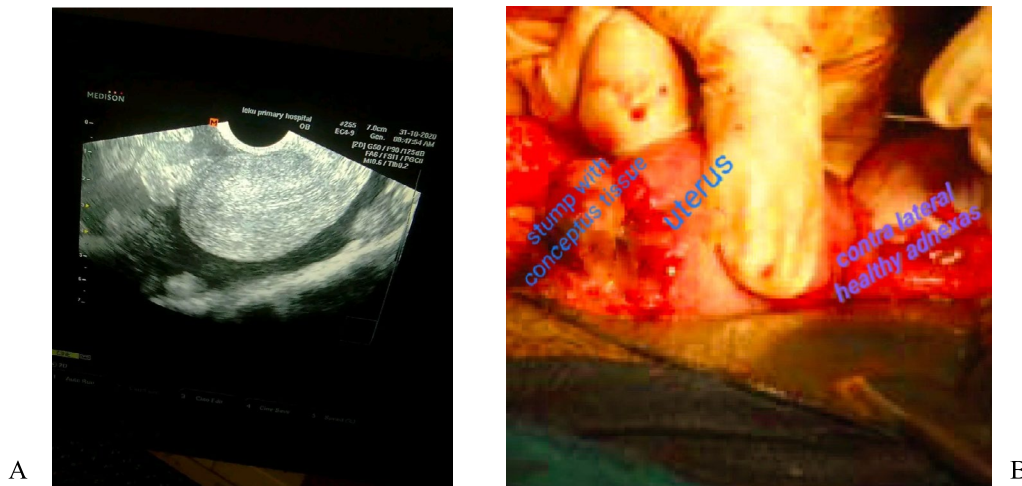
After initial emergency resuscitation she is prepared for exploratory laparotomy for impression of ruptured ectopic pregnancy. Then

patient taken to operation room. Intraoperatively there was massive clot and 1200ml hemoperitoneum which is sucked out. There was rt side contained tissues of abortus from the previously salpingectomies stump and infero-posteriorly the stump was oozing blood trickling to culde-sac. The contra lateral side tube and ovary were quite healthy looking. The uterus was also intact and healthy looking (fig-2B). The salpingectomy done on the stump and suture ligated. Post operatively she took one unit of cross-matched blood and her hemoglobin was 8.7g/dl with HCT of 22.7%(fig-1B).Her postoperative condition was smooth and discharged to home after 72hrs of hospital admission.



A B

**Figure 1:** A & B Preoperative and Postoperative CBC Results



A B

**Figure 2:** A -ultrasound image of ruptured ectopic with cul-de-sac collection and contained clot near the rt side of uterine edge, the uterus clearly seen empty. B-intra-operative image of the tubal stump ectopic pregnancy rupture.

## 3. Discussion

The worldwide incidence of ectopic pregnancy is around 1-2%. In developing nations it raises with increased prevalence of pelvic inflammatory diseases but in developed nations where assisted reproductive technique is growing technology, ectopic pregnancy incidence may increase over natural conception. In our country Ethiopia systemic review and meta-analysis ectopic pregnancy pooled prevalence was reported as 3.61% [1, 2]. More than 90% ectopic pregnancy is tubal ectopic pregnancy with different incidence in different part of the fallopian tube parts. The commonest being ampulla of the fallopian tube. Tubal stump ectopic pregnancy on the ipsilateral salpingectomy site is rare occurrence and few reports are available on literatures [3, 4]. I couldn't find one report from my country Ethiopia.

The chances of ectopic pregnancy recurrence are four fold and it is

around 15% after one ectopic pregnancy and up to 30% after two. After salpingectomy, which is the common surgical intervention for ectopic pregnancy, there is remote chance that the tubal stump can have ectopic pregnancy on the salpingectomies side. Stump ectopic pregnancies are defined as implantation on the remnant part of the tube after salpingectomy [5, 6].

There are several thoughts and theories on the possible mechanism and pathogenesis described in literatures for a recurrent ipsilateral ectopic pregnancy after previous salpingectomy. First theory explains the possibility of migration of spermatozoa through the patent tube into the pouch of Douglas, then travel to fertilize the ovum on the side of the diseased tube remnant. The second theory suggests trans peritoneal passage of the fertilized egg through the contralateral intact uterine tube. Other theory says despite ligation, lumina remain intact in the interstitial portion and distal remnant of the fallopian tube which allows communication between the endometrial and peritoneal cavities and thus migration of the fertilized ovum or spermatozoa from the endometrial cavity to the distal remnant of fallopian tube. There is no cut of point and consensus on how much of any stump remnant should be left at salpingectomy and no literature search doesn't yield any recommendations or guidelines on this. Anatomically 20% of the ovarian supply is derived from the anastomosis of the vasculature of the isthmic portion. Considering this and feeling that given the risk of recurrence, the remnant portion should be left as small as possible. Some experts advise sufficient fulguration while using electro cautery to ablate the patency of the tube [7-9].

Ultrasound is helpful for diagnosis of intrauterine pregnancy or extra uterine pregnancy. Even though it is difficult to effectively diagnose tubal stump ectopic pregnancy. This may be due to the stump proximity to the ovary mistakenly considered as corpus luteum cyst early.

In developing nations like us, patients come late with life threatening conditions after rupture. This is due to scarcity of the imaging setups at the primary health care level. So the early lower abdominal discomfort may be empirically treated for gastro-enteritis, intestinal parasitosis or pelvic inflammatory diseases. These delay patients and increases mortality for patients. So in reproductive age female highly suspicion benefits many patients.

## 4. Conclusion

Stump ectopic is a rare form of ectopic pregnancy and is potentially more dangerous than ampullary tubal ectopic pregnancy. The length of the remnant how much should be left and its association with recurrence needs further case studies.

### *Author's Contributions*

AK is the operating surgeon and compile, organize and write the case report, all the others involved by reading and editing the drafts.


### *Conflict of Interest*

No conflict of interest

### *Funding*

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### *Ethical Approval*

The patient information is not revealed and written informed consent is taken from the patient.

### *Consent*

A written consent form was obtained from the patient to publish this report in accordance with the journal's patient consent policy.

### *Data Availability*

Available at reasonable request from corresponding author

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