Case Report

Perforated Peptic Ulcer (PPU) in Pregnancy during Ramadan Fasting

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ABSTRACT

BACKGROUND: Perforated Peptic Ulcer (PPU) is extremely rare in pregnancy. We report a case of perforated peptic ulcer in pregnancy during Ramadan fasting.

PATIENT AND METHODS: The patient is a 16 years old primigravida who presented with features of peritonitis at 28weeks of gestation while fasting during Ramadan. Ultrasound scan reported a singleton live fetus at 28weeks gestation. At laparotomy via upper midline incision; a 1cm roundish perforation located on the duodenum anteriorly was found with about a litre of gastric juice mixed with blood and food particles in the peritoneal cavity. The perforation was close transversely with omental patch (Modified Graham's patch) and peritoneal lavage done with warm saline. She had a preterm delivery of a 1kg baby 3 days post-operatively by a spontaneous vaginal delivery, but the baby died 3 days later.

CONCLUSIONS: Perforated Peptic Ulcer(PPU) though rare in pregnancy can occur and fasting can be a risk factor.

KEY WORDS: Perforated Peptic Ulcer, Pregnancy, and Fasting.

INTRODUCTION

Better medical management of peptic ulcer disease has reduced the incidence of complications like gastric outlet obstruction (GOO), but perforation especially in the elderly remain unchanged or is on the increase[1-3]. It has been shown that gastric secretions actually decrease in pregnancy while mucous secretions increase leading to relieve of symptoms of peptic ulcer in pregnancy. The incidence of peptic ulcer in pregnancy is therefore reduced and perforated peptic ulcer in pregnancy is extremely rare[4, 5]. We report a rare case of perforated peptic ulcer in a young pregnant Nigerian during fasting.

CASE PRESENTATION

MDA is a 16 year old unbooked primigravida, was about 7months pregnant (uncertain of dates), was referred from a peripheral General Hospital to the accident and emergency unit of University of Maiduguri Teaching Hospital (UMTH) with 2 days history of sudden epigastric pain. The pain was sharp, persistent and severe, associated with nausea and vomiting. It gradually became generalized. It was during the Ramadan fasting period for the Muslims and she was fasting. There was no preceding febrile illness. She was not a known peptic ulcer disease patient and there was no history of ingestion of non-steroidal anti-inflammatory drugs (NSAIDS). She neither smokes nor drinks alcohol.

Examination revealed a young woman in painful distress, pale and febrile. Her pulse rate was 126 beats per minute and regular, blood pressure of 100mmhg systolic and 60mmhg diastolic was recorded. Abdominal examination showed generalized tenderness with guarding, bowel sounds were absent. The fundal height was equivalent to 28 weeks gestation and foetal parts could not be assessed because of marked tenderness. An initial assessment of acute peritonitis in pregnancy was made. Her haematocrit (PCV) was 33%, urinalysis, urea and electrolytes were within normal limits. Abdominopelvic scan showed a singleton life fetus of 28 weeks gestation. Diagnosis of probable peptic ulcer perforation was made based on additional findings of; air under the diaphragm on chest x-ray, positive abdominal paracentesis and repeat PCV had dropped to 27%. She was resuscitated with intravenous fluids, antibiotics analgesics and 2 units of blood group and cross matched. At exploration under general anaesthesia through upper midline incision, about one litre of gastric juice mixed with blood, food debris, and a 1cm roundish perforation on the first part of the duodenum was found. The perforation was closed with an omental patch and abdomen lavage with warm normal saline. Her post-operative period was uneventful. However she went into preterm labour on the 3rd postoperative day and delivered a male baby spontaneously per vaginum weighing 1 kg. The baby was taken to the special care baby unit (SCBU) but died 3 days later. The mother developed wound infection that was managed with antibiotics and wound dressing. The wound healed and she was discharged after 21 days. She was followed up for 1 year with no recurrence having been treated fully medically.

DISCUSSION

Due to reduced gastric secretion and increased production of protective mucus in pregnancy, symptomatic peptic ulcer is rare[4] and PPU in pregnancy is extremely rare[5]. Although, there have been some

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reports on PPU in Nigeria, none had been reported in pregnancy[6,7]. In a study conducted in Ibadan by Irabo, there was no correlation with fasting among PPU patients[6]. However, in a recent report among fasting Muslims in India, the incidence of PPU was significantly higher[8], PPU tended also to develop more during Ramadan in Akara Numune Hospital[9] and prolonged fasting for religious reasons was identified as one of the risk factors for PPU in an Urban African population[10]. The difference in frequency of PPU occurring during and after Ramadan fasting was not statistically significant in a United Arab Emirate Hospital[11]. There are other well-known risk factors for PPU such as; previous history of peptic ulcer disease (PUD), Corticosteriod drugs, other immunosuppressive agents, alcohol ingestion, smoking and ingestion of NSAIDS especially in the elderly females, none was elicited in our patient[2]. She is not a known PUD patient and not having dyspeptic symptoms, but only fasting, that may be the risk factor according to several reports[8-10]. Emergency Surgery for PPU carries high mortality rates ranging from 4% up to 30%[8,9]. Morbidity and mortality is also high where there are co-existing medical illness, preoperative shock, delay in treatment more than 24 hours from time of perforation to operation, older age more than 60 years. Our patients though young (16 years old) presented in shock and there was a 48 hours delay before the referral and another 24 hours delay before Surgery in our centre[12]. Reasons for both the delays includes among other things low index of suspicion and finance.

Conservative Surgery with omental patch is the safest, easiest and fastest operation preferred by many and that can be applied to all situations by every Surgeon especially in pregnancy[12], such procedures can be complimented with effective medical treatment; that includes eradication of H-pylori, H2 blockers and proton pump inhibitors, which our patient had. Though the role of H-pylori in PPU has not been well established[3], current therapy always includes its eradication and recurrences have been low.

In conclusion, we have reported a case of PPU in pregnancy that is extremely rare; which occurred during fasting that may be a risk factor.

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