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Letter to the Editor

Unscarred Uterine Rupture (UUR) - Not A Rarity In Developing Countries

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Abstract

Uterine rupture during pregnancy is a life threatening obstetric complication. It is defined as a nonsurgical disruption in the wall of the uterus along with visceral peritoneum. It is far more common in developing countries due to the numerous direct and indirect factors like lack of family planning, poor maternal health, poor management of labor, home deliveries by untrained professionals and others. It commonly manifests as acute abdomen and hemodynamic instability due to hemoperitoneum.

Letter To The Editor

Dear Editor,

Worldwide incidence of uterine rupture during pregnancy is 1 per 1,416 pregnancies (0.07%). Single most important factor leading to this consequence is a scarred uterus due to previous uterine surgery. Rupture of an unscarred uterus occurs rarely in developed countries its rate is 1 per 8,434 pregnancies (0.012%) whereas the incidence is eight times higher in developing countries that is 1 in 920 (0.11%) [1]. It has been found that uterine rupture can occur in previously normal uterus in early pregnancies and beforehand preparations in such cases prevent from the lethal complications of this dreadful event.

Uterine Rupture is a potentially fatal sequalae of late pregnancy and labor in a uterus with scarring. Rupture of unscarred uterus most commonly involves the lower segment of uterus which is the weakest part [2]. In Pakistan, incidence of uterine rupture is reported in 1 out of 64 deliveries [3]. Only 0.012% of normal uteri are at risk of rupture and chances of rupture increases with the number of previous scars. It is 0.5% after one caesarean section and 2% after two or more than two scars [1]. 29.5 % of the diagnosed Pakistani women had unscarred uteri previously [4].

Factors associated with unscarred uterine rupture (UUR) in developing countries are high parity [5,2], abnormal placenta implantation, uterine anomalies, malpresentations, injudicious use of uterotonics [2], breech extraction, uterine instrumentation, myomectomy and macrosomia [1]. Other factors are low socioeconomic status, unbooked patients, prolonged and mismanaged labor and delay in receiving care during obstructed labor [5].

Clinical presentation of uterine rupture varies at different gestational ages and on the site of rupture. Signs and symptoms include abdominal pain, hemorrhage (revealed or concealed), fetal bradycardia, recession of fetal presenting part, gut prolapse in vagina, presence of placenta at vulva [3], hypotension and hypovolemic shock.

Maternal consequences arising from this event include hemorrhage, anemia, bladder injury, need for hysterectomy, hypovolemic shock and death whereas fetal hypoxia, acidosis, admission to NICU and fetal death can occur [1].

In a study conducted to determine the risk factors of uterine rupture in developing countries, it has been reported that the frequency of uterine rupture is twice among the females who are in their thirties and 8 times higher among grand multiparous women [5].

Diagnosis is challenging due to early pregnancy and non-specific signs and symptoms of hemoperitoneum. Moreover, the rupture of fundal area leads to concealed hemorrhage and intraperitoneal blood collection, often delaying diagnosis [2]. Definitive diagnosis of such cases is based on surgery. Imaging studies like Ultrasound is helpful when defect is large and on anterior surface. Rupture at lower uterine segment leads to per vaginal bleeding and therefore is important in prompt diagnosis. Treatment is directed towards controlling hemorrhage and suturing of primary defect. Choice to perform either surgical repair or hysterectomy depends upon surgeon's expertise, extent and site of defect, co-morbidities in patient etc.

Decrease in rate of uterine rupture can be achieved by taking taking initiatives like improvement in availability of antenatal care, counseling of mothers for hospital deliveries, training programs for midwives and health care providers to manage labor as per protocol, reinforcement of family planning programs. More research and data revision are needed in developing countries to prepare further strategies and to stratify the risk in booked pregnant patients because as discussed here, uterine rupture serves to be lethal in an unscarred uterus if not managed timely and appropriately.

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