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EVALUATION OF THE RECENT UPDATES REGARDING PLACENTA PREVIA MANAGEMENT: SIMPLE LITERATURES REVIEW

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Abstract:

Background

Placenta previa is defined the growth of the placenta at the lower uterine segment near or over internal cervical os. A lot of literature. In the recent a lot of articles were done in order to provide the patients with better outcomes.

Objective

This study aims to evaluate the recent updates regarding placenta previa risk factors, clinical presentation, diagnosis and management.

Methods

PubMed database was used for articles selection, and the following keys used in the mesh {Placenta previa, Management, risk factors and diagnosis}. A total of 6 articles were enrolled according to our inclusion and exclusion criteria.

Conclusion

Placenta previa start to appear at the second and third trimester, physicians should be able to identify the condition during the routine ultrasound scan or at sudden presentation in order to provide the best outcomes for the patients. In addition, Placenta previa patients should be educated well about their condition. As a general idea caesarean section is method of choose for delivery.

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INTRODUCTION:

Placenta is a well vascularized organ that maintain the pass of nutrition and oxygen through the umbilical cord into the foetus. Second and third trimester bleeding can occur as a result of variant causes but in our study we will be focusing on placenta previa (PP).

PP occur as a result of low implantation of placenta near to the opening of the internal cervical os. Various classifications were made to depict PP. A complete PP defined as a placenta that completely covers the internal cervical os, and it can be further classified by the position of the placenta in the uterus as anterior, posterior, or lateral. A partial PP partially cover the internal cervical os. Some authors distinguish this from a marginal previa, which is defined as a placenta edge at the margin of the internal os. In contrast, a low-lying placenta is located near to the internal os but it does not reach the margins.

PP increase the hazard of second and third trimester bleeding which is positively associated with escalating the jeopardy of maternal morbidity and mortality. During the prenatal period physicians should assess the different factors associated with excessive bleeding during pregnancy and around the delivery time.

In our review we aim to discuss the recent updates regarding PP risk factors, diagnosis and management in order to provide simple yet comprehensive review of the recent articles.

METHODOLOGY:

Sample

We performed comprehensive search using biomedical databases; Medline, and Pubmed, for studies concerned with placenta previa published between 2013- 2018 in in English language. Keywords used in our search through the databases were as {placenta previa, Management, Diagnosis and risk factors}. More relevant articles were recruited from references lists scanning of each included study.

Analysis

No software was used, the data were extracted based on specific form that contain (Title of the study, name of the author, Objective, Summary, Results, and Outcomes). Double revision of each author outcomes was applied to ensure the validity and minimize the errors

DISCUSSION:

As was mentioned placenta is highly vascularised organ and is responsible for foetal oxygen and nutrition supply. Maintenance of placenta function is very important in order to ensure foetal growth and avoid unwanted bleeding.

PP in most of the circumstances occur as a result of abnormal implantation of the blastocysts as a result of uterus damage. In the recent years a lot of literatures discussed the risk factors that stand behind PP development (Table 1). According to the data women age is a strong risk factor for PP as increase in pregnant female age escalate the jeopardy of PP occurrence. In addition, previous caesarean section [1] is also associated with significant escalation of the risk, multiparity and multifetal gestation were shown to have a risk in PP development [2,3].

Table 1: Risk Factors for Placenta Previa

- Advancing maternal age
- Multiparity
- Multifetal gestation
- Living at higher elevations
- Previous cesarean section
- Previous placenta previa
- History of uterine surgery
- Maternal tobacco or cocaine use

In the recent years the incidence of PP increased with the increase in the caesarean sections. In most of the instance PP is noticed during the second trimester during routine ultrasound examination. Vast majority of the discovered of PP will resolve in the third trimester with only 26% of the diagnosed complete PP will continue up to delivery [4,5].

PP present in vast majority of the cases as suddenly

painless bleeding in the second and third trimester. Bleeding may be small in amount and recurrent as in most of the cases and suddenly cease. In other situation, during the pregnancy there might be no bleeding but as the delivery start a massive bleeding may occur. PP as a result of persistent recurrent bleeding may lead to development of maternal anaemia which rarely be significant. However, preterm delivery may occur as a result of increase in the risk of significant bleeding occurrence, fetal growth restriction and congenital anomalies [6,7,8].

For PP diagnosis a routine ultrasound scan during the second and third trimester may lead to incidental diagnosis. In addition, if a pregnant female presented with sudden onset of painless vaginal bleeding a physician should take in consideration PP diagnosis. Abdominal ultrasound has a 96 % sensitivity. Pregnant female should be advised to empty her bladder before the scan because of the increase in risk of having false positive result with a full bladder. In addition, physicians should assess the margin of the placenta during the scan if it was fundus attached placenta. Although transabdominal ultrasound is very sensitive in PP diagnosis still transvaginal approach is more accurate for diagnosis of PP. Another technique that may be helpful is the use of MRI, it's highly sensitive and accurate but it's rarely used due limited number of hospitals that can provide and higher cost [9].

In few minor circumstances the use of diagnostic modality can't be performed. In such situation PP can be diagnosed by palpation of the placenta through cervical os. This should be done by an expert physician and very gently as minimum amount of manipulation can cause a massive haemorrhage. This procedure should be done in the operation room as an urgent delivery may need to be done [10].

MANAGEMENT:

- **PP Without Bleeding**

In such situations patients with PP can be managed as an outpatients under the following conditions: patients is complaint, lives near to the hospital and has a 24 hour emergency transportation to the hospital [11].

The outpatient management consist of restriction of activity and avoidance of any efforts and work, continuous ultrasound follow up, patient education, caesarean delivery when fetal lung is mature avoidance of sexual intercourse and digital cervical examination [12].

Patient education is very important and help in rising there understanding about their condition [13]. She should be educated that in case of any contraction, bleeding and abdominal pain she has to contact her treating physician. Contractions can lead to thinning of lower uterine segment which may cause a massive bleeding. In addition, iron supplement in order to help in maintenance of adequate hematologic reserve is important.

The time for fetal delivery depends on evaluation and balancing between risk of prematurity and massive haemorrhage. In case of asymptomatic patients with PP covering the cervical os, delivery can be made at 36 or after with only caesarean section approach. In case of marginal placenta which does not cover the cervical os vaginal delivery can be considered. Choosing to go for vaginal delivery should be only for individualised cases after explanation the jeopardies that stand behind.

- **PP with Bleeding:**

In case of a pregnant female presented with acute bleeding, immediate evaluation of the patient vital signs should be done. In addition, insertion of 2 large bore catheters, complete blood count, coagulation profile, blood cross- matching, and preparation of packed RBC with the coagulation factors should be done. After patients stabilization patient should be admitted for mentoring. Vitals, urine output, and patient's symptoms should be fully evaluated and continuously observed. In addition, fetal monitoring and assessment needs to be done. In general the use of tocolysis agent is not recommended in case of active bleeding but might be used in some situations [13].

In case of continues recurrent bleeding delivery should be considered at 34 weeks of pregnancy in order to avoid massive bleeding after that. In case of fetal instability and continuous maternal bleeding before 34 weeks delivery should be done after administration of antenatal corticosteroid. However, if bleeding become less severe or stopped delivery may not be indicated. Recent literatures found that almost 50% of patients with PP presented with massive bleeding that stopped delivery can be delayed for additional 4 weeks [13,14].

In general a corticosteroids course should be given for symptomatic females between 24 and 34 weeks of pregnancy. In addition, Rh immune globin should be provided for Rh- negative pregnancy.

In case minimum small intermittent bleeding amount an outpatient management may be considered after evaluation of general patient situation and fully education is provided as the recent literatures did not find any increase in the morbidity and mortality [15].

- **Delivery:**

In vast majority of the cases with PP caesarean delivery is modality of choice with rare exceptions in Table 2. In case of marginal PP with fetal head at the os, vaginal delivery can be done. According to the literatures fetal head is able to produce enough pressure that will prevent bleeding [16].

Table 2: Exception to Cesarean Section

- Pre- viable fetus
- Fetal demise
- Marginal previa (individualize)
- Low- lying placenta

During delivery of a patient with PP 2-4 packed RBC should be ready regardless the delivery approach. If vaginal delivery was chosen it should be under the care of experienced physician and neonatal support, enough blood product and near to the operation room because an urgent caesarean section may need to be done.

According to the literatures there is a risk of 10 -15% of having placenta accreta so when going with Caesarean section the patient should be informed that there is a risk of hysterectomy if placenta accreta was found.

Before the incision the physician should be fully aware about the location of the placenta in order to avoid damage which may cause a significant bleeding. The location of the placenta can be determined pre or intra operatively with use of ultrasound. In general transverse incision is preferred but longitudinal incision can be used in case of anteriorly located placenta.

Placenta should be delivered spontaneously in order to avoid unwanted massive bleeding and due to increased risk of placenta accreta. Variant approaches can help in management of massive bleeding during caesarean section such as over sewing the implantation site, performing bilateral uterine or internal iliac artery ligations, packing the area with sterile gauze, or using a Bakri balloon[16], and last thing to be done is hysterectomy if the physician was not able to control bleeding.

After successful delivery the female should be informed that there is a risk of 4-8% in the next pregnancy for having PP and the risk of placenta accreta occurrence [3].

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