Jehovas Witness

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Date of Submission: 24-10-2019	Date of Acceptance: 09-11-2019

I. Back Ground:

Identifying a patient as a Jehovah witness is a key step in prenatal care otherwise unidentified can cause a major havoc in Case of haemorrhagic emergencies and can even cause maternal death.

All the caring people who are managing these cases should be fully aware of all the medical & surgical modalities in the absence of blood transfusion and preventing the death of a mother

II. Case Review:

A 29 years old Asian lady in her first pregnancy was booked at 18 weeks of pregnancy. Her all booking blood test were normal. Her HB was 11.9 gm.%. She was considered as low risk case. Her next visit was at 21 weeks, which showed a normal fetus with normal morphology, but placenta was low lying and posterior. She had regular visits at the interval of 4 weeks until minimal bleeding at 32 weeks.

Ultrasound was repeated and a placenta praevia lying posteriorly was found while covering the internal os. It was grade 3 placenta praevia. Patient was advised to stay in the hospital for rest and observation but patient declined and left hospital against medical advice.

She was seen in 2 weeks' time with no further history of bleeding. She was advised for elective cesarean section at 37 weeks.

During all this time she did not revealed about her religious believe as Jehovah witness although she was counseled for blood transfusion at the time of cesarean section.

At 36+ 6 weeks she presented to emergency room with massive APH and Abruption.

She lost about 1 liter of blood. Patient was resuscitated with Gelufusil and Hartman solution but she refused for blood transfusions.

Hospital director, anaesthetist and haemotologist were summoned and patient was taken to operation theaters for crash cesarean section. Through a Cohan's approach an alive baby girl was delivered. Baby's weight was 2.2 kg and had good apgar score.

Placenta was found to be grade 3 posterior and covering the internal os.

1 liter of retro placenta clots were also removed along with placenta as it was half way separated. Placenta was adherent to the internal and was difficult to be pealed.

Patient had intractable bleeding from the post uterine wall adjacent to internal os.

Haemostatic stitches were applied to the placental bed but there was still some bleeding. An intrauterine balloon was retained in the lower segment and 40 cc of fluid was inflated in the size 14 fogeys catheter with external traction to have tamponade effect. Uterus was closed back in 2 layers. Uterus was still atonic. Ergometrium, syntocinon bolus doses were given and maintain dose was also initiated. As all these measure were not effective so injection Carboprost 250 mcg was given in the uterine muscle directly in both upper and lower segment for quick action.

As uterus was periodically contracting and retracting so after doing the bimanual compression test and confirming that there was no other cause of bleeding except atonic uterus a B lynch suture was applied on closed uterus with 2/0 vicryl stich.

Most of the bleeding was stopped except little trickling from the vagina.

A quick bleeding clotting profile was done the theatre along with FBC.

HB was 4.3gm%, platelet 117,PT 19, APTT 45.

To avoid further bleeding and DIC r factor VII 90 mgi/m was given.

When there was no further bleeding and patient was stable so she was transferred to ICU for further management.

Relatives and patient were again counselled regarding blood transfusion and risk of further bleeding, potential hysterectomy or cardiac arrest but patient and family refused.

Patient had hyperbaric oxygen therapy, erythropoietin 10000 iu unit daily, 200mg iron and high protein diet was given. She was also started on tranxeamic acid 1 gm. three times daily.

Follow up:She recovered very fast and was discharged home on day 7.

Her HB was 6.8gm %. She had follow ups every week until her HB was 11 gm after 6 weeks and so was discharged from our care.

III. Discussion:

Managing Jehovah witness with massive obstetric heammorhage presents challenges both at the level of treatment strategy and ethics. It is a retrievable condition and recent advances in the novel therapeutic agents have supported the management of Jehovah agents as seen in our case.

All women who refuse blood transfusion should be counselled for increased risk mortality and earlier surgical intervention as hysterectomy as compared to the women who acceptblood transfusion^{1.}

A pregnant Jehovah witness who refuses blood transfusion have 65 fold increased risk of death.²

It is the paramount importance of clinician caring for pregnant Jehovah witness to understand the relevant ethical and legal customs to be well versed in the management and alternative available

Rapid and definitive management of obstetric haemorrhage should be undertaken.

Obstetric haemorrhage is a single most significant cause of death so it is important to ensure an I/ V line. Active 3rd stage of labour and use of Oxytocin, Ergometrium and Carboprost should be earlier than other cases.

Additional intra operative techniques as uterine artery ligation, hypogastric artery ligation and internal artery ligation and B lynch should be used for refractory bleeding. There should be lower thresh hold for hysterectomy in case of significant PPH.

Cell saver system may play a role in the management of Jehovah witness as it is regarded as autologous blood donation^{3,2}.Cell saver has been used in pregnancy and is safe and life saving.^{4,5}The theoretical risk of fetal cells entering the maternal circulation, leading to amniotic fluid embolism has never definitely be substantial⁶. A multicenter historical cohort study that evaluated the safety of intra-operative autologous blood collection and auto transfusion during caesarian delivery showed that there is no increased risk of complications⁷.

Hyperbaric oxygen therapy is paramount in the severe anaemia due to acute blood loss.

It increases the oxygen in the blood. Mcloughlin and colleagues described a case of pregnant Jehovah witness who had abruption ⁸. She had emergency LSCS and her HB dropped to 2.8gm% with concerns for myocardial and intestinal ischaemia. Hyperbaric oxygen was used which reversed the ischaemic ECG changes and urinary output and reduced the cardiac output.

An alternative that can also be considered in acute management of acute obstetric haemorrhage is recombinant factor VII a synthetic product. Laired and Carabiner recently reported in a case of Jehovah witness with protracted bleeding. After the administration of 9 mg of rFVIIa bleeding subsided in 30 minutes. Of note this product is associated with increased risk of thromboembolism with an incidence of 1% to 2% to as high as $9.8 \, \%^{9,10,11,12,13}$.

Role of interventional radiology to block the large arteries in case of acute muscle hemorrhage is controversial as it takes time. Patient should be heamodynamically stable to proceed or it should be done as elective procedure before as surgery in Jehovah witness.

IV. Conclusion:

A case of young Jehovah witness mother with good outcome who presented with placenta praevia and accreta with life threatening haemorrhage.

She lost about 3 liters of blood in spite of all medical and surgical measures.

Her postoperative hemoglobin dropped to 4.8gm%.

She had ICU care with hyperbaric oxygen, erythropoietin and iron supplement with high protein diet. Her haemoglobin improved to 6gm% and she was discharged home for long-term iron replacement therapy.

Lesson To Learn:

Management of Jehovah witness is a multidisciplinary task. Experts from all relevant specialties as fetomaternalphylician, hematologist, anesthetist, interventional radiologist and vascular surgeon should be involved and all measures should be taken effectively and rapidly to reduce the acute blood loss as much as possible.