P₂A₀ 38-year-old Woman Postpartum Hemorrhage with Hemorrhagic Shock and Severe Anemia Caused by Uterine Atony: A Case Report from Southwest Sumba, East Nusa Tenggara

Selvy Anriani and Harold I. M. Rumopa

ABSTRACT

Postpartum hemorrhage is one of the most common obstetric emergencies and the largest contributor to maternal mortality in the world, with uterine atony being the most common cause. A 38-year-old woman came to Karitas Hospital complaining of vaginal bleeding after giving birth three hours ago. On examination, the patient was somnolent with signs of shock. Anemic conjunctiva, pale lips, weak contractions of the uterus, and active vaginal bleeding. The laboratory results show severe anemia and leukocytosis. The diagnosis was P₂A₀ 38-year-old woman, postpartum spontaneously with hemorrhagic postpartum caused by uterine atony with hemorrhagic shock and severe anemia. The treatment was given according to the algorithm for managing postpartum hemorrhage. Uterine atony is caused by many factors, one of which is precipitous labor as experienced by the patient. Fluid resuscitation, uterotonic, uterine massage, bimanual compression, and the insertion of a condom catheter were given because there was still active bleeding after the 3rd stage of active management. Finally, surgical intervention should’ve been taken as the last step to stop the bleeding. Fast and precise handling can prevent complications of postpartum hemorrhage, namely shock and death.

Keywords: anemia, hemorrhagic shock, postpartum hemorrhage, uterine atony.

I. INTRODUCTION

Postpartum hemorrhage is one of the emergencies in obstetrics and also the largest contributor to maternal mortality in the world [1]. As many as 25% of maternal deaths in the world are caused by postpartum hemorrhage [2]. According to the World Health Organization (WHO), in 2000, 13,795,000 women experienced postpartum hemorrhage, and 13,200 of them died [3]. Uterine atony is the most common cause of postpartum hemorrhage, according to a study in 2016. Of the total study population of 74 women who experienced postpartum hemorrhage, 61 (82.4%) were caused by uterine atony. Uterine atony is a condition where the myometrial tissue of the uterus contracts inadequately and does not squeeze the spiral artery, so bleeding occurs [4].

There are several complications that occur due to postpartum hemorrhage, such as anemia, ischemic myocardium, ischemic anterior pituitary (Seehan's syndrome), postpartum depression, shock due to hemorrhage, and death [5]. Hemorrhagic shock is specifically an acute loss of blood in significant amounts in the chest or abdominal cavity so that the circulation volume becomes inadequate [6]. Approximately 29.3% of maternal deaths worldwide and 26.7% of severe complications in women after childbirth are due to severe bleeding after childbirth. Although there is a decrease in the incidence of maternal mortality due to bleeding from year to year, postpartum hemorrhage cannot be underestimated as a cause of maternal mortality, and it is still a worldwide problem [7].

II. CASE PRESENTATION

A 38-year-old woman was referred from the Community Health Center to Karitas Hospital Southwest Sumba with complaints of bleeding from the vagina after giving birth three hours ago. On examination, the state of consciousness was somnolent, and the general condition seemed to be seriously ill. Two intravenous lines were inserted: on the right line is Ringer Lactat + Oxytocin (30 IU) at 30 drips per minute (dpm), and on the left line, Ringer Lactat drops quickly. Blood pressure 80/40 mmHg, pulse 130 beats per minute (bpm) weak, breathing 26 bpm, and temperature 35.6°C. Both eye conjunctiva was anemic, lips were pale, neck and thorax examinations were normal, and an abdominal examination revealed a palpable uterus at umbilicus level with weak contractions, active vaginal bleeding, cold acral, and capillary refill time (CRT) > 3 seconds. The urinary catheter inserted has a total volume of urine in the bag of 300 mL. Laboratory findings: hemoglobin 6 g/dl; leukocytes 23,000/mm³; HCT 19.72%; platelets 300,000/mm³. The diagnosis of this patient was P₂A₀ spontaneous postpartum
with postpartum hemorrhage caused by uterine atony with hemorrhagic shock, and severe anemia. The final management performed on this patient was a subtotal hysterectomy to stop the bleeding.

III. DISCUSSION

Postpartum hemorrhage is the leading cause of maternal death in developing countries. Despite advances in maternal and postnatal care, the incidence of postpartum hemorrhage remains high. It affects 10% of births and is responsible for 13,200 maternal deaths each year worldwide. Uterine atony is the main etiology for 80% of postpartum hemorrhage [8].

In this case, a 38-year-old female P2A0 postpartum hemorrhage et causa uterine atony with complications of hemorrhagic shock and severe anemia. The diagnosis was based on anamnesis, physical examination, and laboratory findings. Postpartum hemorrhage has an etiology of the "Four Ts Mnemonic", the first Tone (uterine atony), the second Tissue (placenta or membranes), the third Trauma (vaginal laceration or portional rupture), and the last T is Thrombin (blood clotting problems). In this patient, postpartum hemorrhage was caused by uterine atony (tonus category) [9]-[11].

Postpartum hemorrhage is defined as bleeding that occurs immediately after delivery and exceeds 500 mL in vaginal delivery or more than 1000 mL in cesarean section [6]. The diagnosis of postpartum hemorrhage was obtained from the anamnesis that the patient experienced continuous bleeding from the vagina after giving birth at the Community Health Center. In addition, from the physical examination, there was continuous bleeding from the vagina. The continuous bleeding led the patient to a hemorrhagic shock state. Hemorrhagic shock was obtained from the examination because the patient is somnolent and accompanied by the signs of shock (hemodynamic instability), such as hypotension, tachycardia with a weak pulse, and cold acral. Heavy bleeding also caused the patient to have severe anemia. The anemia was known from the physical examination findings, such as anemic conjunctiva, pale lips, CRT> 3 seconds, and the result of the laboratory finding Hb 6 gr/dl.

Uterine atony is a state of inadequate contraction of the myometrium of the corpus uterine in response to endogenous oxytocin released during labor. The diagnosis of uterine atony is obtained from a physical examination where the patient's uterine contractions are weak. One of the risk factors for uterine atony is partus precipitatus, as experienced by the patient [4]. The patient had a 4-centimeter cervical opening at 8 am, but at 10.41 am, the cervical opening was complete, and the patient had a spontaneous delivery. After delivery, active management of the third stage of labor was carried out, but due to weak uterine contractions, the placenta could only be removed completely after 50 minutes with the condition of the cotyledons and membranes intact, but there was a large blood clot next to the placenta (Fig. 1).

The initial management carried out on the patient was to provide fluid resuscitation with crystalloid fluids, oxygen delivery with a nasal cannula at 2 liters per minute (LPM), a urinary catheter inserted, a uterotonic oxytocin drip of 30 International Units (IU) in RL 500 mL at 30 dpm, methylergometrine 0.2 mg intramuscularly (IM), perform bimanual compression, and insert a condom catheter into the uterine cavity. However, the bleeding couldn’t be stopped, so the surgical intervention had to be carried out. Started with a conservative surgical technique, B-Lynch sutures (Fig. 2). This technique did not stop the bleeding, so the operator finally decided to perform a subtotal hysterectomy. All these actions are in accordance with the post-partum hemorrhage management algorithm [12] (Fig. 3). The patient was given four bags of packed red cell transfusions from intraoperative to postoperative. The patient was discharged 5 days postoperatively with a better condition, normal vital signs, a normal physical examination, and a final Hb of 8.3 mg/dL.
IV. CONCLUSION

Postpartum hemorrhage is one of the most common obstetric emergencies and the largest contributor to maternal mortality in the world, with uterine atony being the most common cause. The main principle for handling postpartum hemorrhage is fluid resuscitation. In addition, determining the cause of postpartum hemorrhage based on the Four Ts mnemonic (tone, tissue, trauma, and thrombin) is very important to plan the therapy and subsequent actions. A fast and appropriate action determines a good outcome for the patient.

CONFLICT OF INTEREST

Authors declare that they do not have any conflict of interest.

REFERENCES


