

DOI: 10.18203/2320-1770.ijrcog20150104

Case Report

A life threatening intracerebral hemorrhage during pregnancy

Kamala Verma*, Sudesh Agrawal

Department of Obstetrics & Gynaecology, S.P. Medical College and Associate Group of P.B.M. Hospital, Bikaner Rajasthan, India

Received: 27 April 2015

Accepted: 10 May 2015

***Correspondence:**

Dr. Kamala Verma,

E-mail: girishdrbaniya@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Intracerebral hemorrhage (ICH) during antenatal period is an infrequent but serious complication. This is a case of elderly woman with pregnancy induced hypertension who developed spontaneous ICH during the thirty five week of pregnancy. She presented to our emergency department with altered sensorium, aphasia and hemiparesis. Intracerebral hemorrhage was diagnosed by MRI. Magnetic resonance angiography failed to identify an aneurysm or arteriovenous malformation. She underwent successful emergency cesarean section. In this case we report the rare Intracerebral hemorrhage (ICH) during antenatal period and its challenging complication, diagnosis and management.

Keywords: Intracerebral hemorrhage, Stroke, Cesarean section, Antenatal period, Complication

INTRODUCTION

Cerebrovascular accidents (CVA)/stroke in antenatal period are important causes of maternal & perinatal morbidity and mortality. Cerebrovascular accidents are usually classified in ischemic and hemorrhagic variety. The incidence of stroke is about 1 in 600 pregnancies. Incidence of ischemic stroke during pregnancy varies from 5 to 210 per 10000 deliveries while incidence of hemorrhagic strokes is 1 in 15000 pregnancies. The rarer intraparenchymal hemorrhage variety of hemorrhagic stroke is noted in 4.6/100000 deliveries to 8/100000.^{1,2}

Most of the patient with intraparenchymal hemorrhage belongs to age group of 20-50 years. Risk of intracerebral hemorrhage is more in peripartum period (Relative risk - 28.3, 95%, Confidence interval 13.0-61.4) as compared to antenatal period (Relative risk - 2.5, 95%, Confidence interval 1.0-6.4).^{3,4} Most common causes of intracerebral hemorrhage are eclampsia (44%) followed by ruptured vascular malformation (37%) and rarely metastatic choriocarcinoma or disseminated

intravascular coagulation.⁵ Significant independent risk factor for ICH includes advanced maternal age, pre-existing hypertension, gestational hypertension, preeclampsia/eclampsia, coagulopathy, tobacco use and smoking. In 20% of cases cause remains undetected.⁶

CASE REPORT

A 35 year old second gravida female in 8th month of her pregnancy admitted to emergency department with altered sensorium, aphasia and right side hemiparesis. History revealed by her relative they told that she had pregnancy induced hypertension and taking antihypertensive drugs. One day before admission she had sudden onset of severe headache and became unconscious at home. Then she was brought to primary health center, from there she was referred to our hospital. On admission she was semiconscious, unable to speak and she had right sided upper and lower extremities weakness. Her blood pressure was increased with reading as high as 200/100 mmHg. Other vital signs were in normal ranges. Urine albumin was +2, prothrombin time,

Partial thromboplastin time, thyroid function test, liver function, renal function test were in normal range.

Emergent MRI on admission revealed intracerebral hemorrhage in left parieto occipital region with moderate perilesional edema. Mass effect of lesion was causing effacement of left lateral ventricle and midline shift of approximately 09 mm towards right side. Obstetrical ultrasonography revealed single live pregnancy of 35 ± 1 weeks. Under general anesthesia emergent cesarean was performed and healthy male baby of 2.5 kg weight delivered. Apgar score at first & five minutes was 6/10 and 9/10 respectively.

Intravenous mannitol was used to reduce intracranial tension along with antiepileptic and high dose steroids. Blood pressure was controlled with antihypertensive drugs.

Inspite of all efforts patient deteriorated and expired on 5th post-operative day.

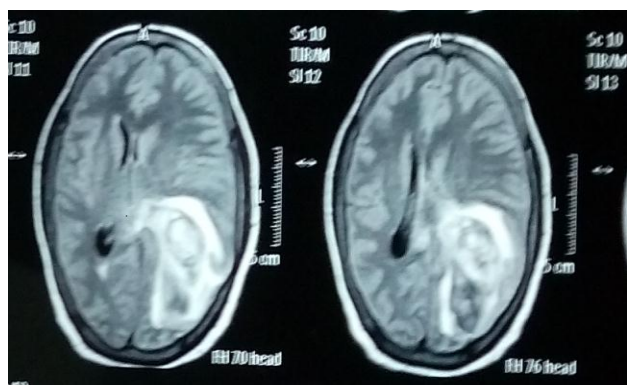


Figure 1: A left parieto occipital region bleed with moderate perilesional edema and midline shift.

DISCUSSION

Cerebrovascular accidents during pregnancy is uncommon disease but it is significant because case fatality is up to 20%.⁷

Wittin et al. have reported 24 cerebrovascular disorders in antenatal period out of these six patients were diagnosed as ICH.⁸ Kittner SJ et al. found that postpartum period is more risky as compared to antepartum period (28.3 versus 2.5).⁷

In our case we met an elderly pregnant woman with spontaneous ICH. She had pregnancy induced hypertension that was detected during her antenatal visit and antihypertensive drugs were started but she was not taking medicine regularly. At 35 weeks of gestation she presented to our hospital in serious condition and ICH was diagnosed by MRI. She was taking antihypertensive drugs but she had stopped that medicine one month before the attack because of lack of awareness and unavailability of antenatal facility in rural area.

The presentation and clinical features of stroke in pregnancy can be variable and diverse.⁹ Mean gestational age at the time of stroke observed is 32 weeks (22-32 week) & 6 weeks postpartum.¹

Suspicious neurological sign & symptoms in a gravid patient should be thoroughly evaluated. Classical clinical presentation of all intracranial hemorrhages includes different forms of photophobia, convulsions, temporary unconsciousness as well as neck stiffness. For diagnosis a complete stroke workup, including brain computerized tomography with abdominal shield or MRI, transthoracic echocardiography and vascular ultrasound should be completed in pregnant women. Cerebral angiography can be done to rule out arteriovenous malformation.¹⁰

Management of intracerebral hemorrhage follows standard neurological principles. In case of viable pregnancy emergency cesarean section is needed for fetal preservation.

Most concerning is the lack of data regarding both prevention, diagnosis and management of pregnancy related stroke.

This case demonstrates the importance of diagnosis and treatment of hypertension during pregnancy to prevent serious complication such as ICH.

In the developed countries like India where most of the pregnancy remain uncared. This entity on many occasion remain undetected till major complication supervenes. Effective prevention of these complications warrants careful antenatal checkup and blood pressure management so that both maternal and fetal morbidity and mortality can be reduced.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the institutional research review board & ethics committee

REFERENCES

1. Tate J, Bushnell C. Pregnancy and stroke risk in women. *Women's Health (London, England)*. 2011 May;7(3):363-74.
2. Simolke GA, Cox SM, Cunningham FG. Cerebrovascular accidents complicating pregnancy and the puerperium. *Obstet Gynecol*. 1991 Jul;78(1):37-42.
3. Bateman BT, Schumacher HC, Bushnell CD, Pile-Spellman J, Simpson LL, Sacco RL, et al. Intracerebral hemorrhage in pregnancy: frequency, risk factors, and outcome. *Neurology*. 2006 Aug;67(3):424-9.
4. Dai X, Diamond JA. Intracerebral hemorrhage: a life-threatening complication of hypertension during pregnancy. *J Clin Hypertens (Greenwich, Conn.)*. 2007 Nov;9(11):897-900.

5. Veillon EW, Martin JN. Pregnancy-related stroke. In: Veillon EW, Martin JN, eds. *Critical Care Obstetrics*. 5th ed. London: Wiley-Blackwell; 2010: 235-255.
6. James AH, Bushnell CD, Jamison MG, Myers ER. Incidence and risk factors for stroke in pregnancy and the puerperium. *Obstet Gynecol.* 2005 Sep;106(3):509-16.
7. Kittner SJ, Stern BJ, Feeser BR, Hebel R, Nagey DA, Buchholz DW, et al. Pregnancy and the risk of stroke. *N Engl J Med.* 1996 Sep;335(11):768-74.
8. Witlin AG, Friedman SA, Egerman RS, Frangieh AY, Sibai BM. Cerebrovascular disorders complicating pregnancy--beyond eclampsia. *Am J Obstet Gynecol.* 1997 Jun;176(6):1139-45.
9. Sharshar T, Lamy C, Mas JL. Incidence and causes of strokes associated with pregnancy and puerperium. A study in public hospitals of Ile de France. *Stroke in Pregnancy Study Group. Stroke.* 1995 Jun;26(6):930-6.
10. Hameed AB, Shrivastava VK, Blair L, Wing DA. Intracranial hemorrhage in pregnancy. *AJP Rep.* 2012 Nov;2(1):47-50.

DOI: 10.18203/2320-1770.ijrcog20150104

Cite this article as: Verma K, Agrawal S. A life threatening intracerebral hemorrhage during pregnancy. *Int J Reprod Contracept Obstet Gynecol* 2015;4:840-2.