Arterio-Venous Malformations and Retained Products of Conception: A Case Report and Brief Review

Corresponding Author:
Dr. Veena Aseeja,
Associate Professor, Obs and Gynae MMIMSR Mullana Ambala, 160104 - India

Submitting Author:
Dr. Veena Aseeja,
 Associate Professor, Obs and Gynae MMIMSR Mullana Ambala, 160104 - India

Article ID: WMC002204
Article Type: Original Articles
Submitted on: 13-Sep-2011, 04:57:05 PM GMT Published on: 14-Sep-2011, 08:09:40 PM GMT
Article URL: http://www.webmedcentral.com/article_view/2204
Subject Categories: OBSTETRICS AND GYNAECOLOGY
Keywords: AV malformations, Uterus, Retained products

How to cite the article: Aseeja V, Kaur T, Taneja B K, Mittal A. Arterio-Venous Malformations and Retained Products of Conception: A Case Report and Brief Review. WebmedCentral OBSTETRICS AND GYNAECOLOGY 2011;2(9):WMC002204
Arterio-Venous Malformations and Retained Products of Conception: A Case Report and Brief Review

Author(s): Aseeja V, Kaur T, Taneja B K, Mittal A

Abstract

Uterine Arterio-venous malformations (AVM) are rare and potentially life threatening condition. AV malformations may be congenital or acquired. We report a case of acquired uterine AV malformation associated with retained products of conception. The condition can easily be confused with gestational trophoblastic disease.

Introduction

Arterio venous malformations of the uterus are uncommon entities and should be considered in patients who present with unexplained profuse genital bleeding. This entity is generally associated with presence of molar disease, choriocarcinoma and uterine surgery, but may be congenitally acquired. We report a case of acquired uterine AV malformations with retained products of conception who presented to us with recurrent episodes of bleeding after medical termination of pregnancy.

Case Report

A 39 year old female, P3L2A1 came to us with recurrent episodes of bleeding per vagina after MTP at 11 weeks of pregnancy at a private clinic. She had MTP two months back by suction evacuation and after that D&C twice because of recurrent bleeding at same clinic. Post MTP ultrasonography findings were suggestive of retained products of conceptions. She had received two doses of methotrexate injection for persistent complaint of bleeding. B-hcg level were not done prior to admission to our hospital. Tissue was not sent for histopathological examination after D&C. Her last child was 12 yrs old, delivered by caesarian section. At the time of admission vitals were stable, she was not bleeding, and mild pallor was present. On per vaginal examination external os was closed. Uterus was 6-8 weeks pregnant uterus size and bilateral fornices were free. Her Hemoglobin was 9.4 gm%, BT, CT and PTI were WNL. Ultrasonography and Color Doppler showed heterogeneous mass 2.2cm x 2cm size with prominent vessels in myometrium suggestive of either retained products of conception (with AV malformations or Invasive mole (Fig 1&2). Urine for pregnancy test was negative. B-hcg level were 22.3 miu/ml. D &C was attempted but she started bleeding profusely and the procedure was abandoned, bleeding get stopped within five minutes. She received two units of blood transfusion. In view of recurrent bleeding and doubtful diagnosis of retained POC with AV malformations or invasive mole the decision for hysterectomy was taken. She had excessive bleeding during surgery and received three units of blood. Intra-operatively there was leash of vessels on right side and anterior surface of uterus in isthmic region. She had excessive bleeding during surgery and received three units of blood. On cut section uterus showed a mass about 3x3cm size with dilated vessel channels in isthmocervical area. Histopathological report came out as products of conception. Post operative period was uneventful.

Discussion

Acquired uterine Arterio-venous malformation is a rare but potentially life threatening condition and as such must be considered in the differential diagnosis of cases of abrupt, profuse vaginal bleeding following uterine curettage. The condition can easily be confused with retained products of conception and gestational trophoblastic disease. (1)

Uterine AVMs result in sudden and massive vaginal bleeding that maybe life-threatening. They may occur as late postpartum hemorrhage or post abortion hemorrhage, and the bleeding results from a spontaneous vessel rupture or vessel rupture triggered by a D&C.

Ginsberg N.A. et al reported a case of Arterio-venous malformation of uterus following dilatation and suction curettage for missed abortion. The patient had recurrent bleeding episodes after suction curettage and even after repeat D&C. Uterus appeared normal by gray scale ultrasound imaging. However, color flow Doppler study showed marked turbulence in the anterior wall. Angiography confirmed the presence of
AV malformation. (2)
S.M.Kelly et al reported the association of an Arterio-venous malformation with secondary postpartum hemorrhage in a young woman who presented with recurrent vaginal bleeding in third week post caesarian section. (3)

Our case also had D&C twice outside with the diagnosis of retained products of conception, had received methotrexate injection, but bleeding did not stop. Doppler flow study at our institution showed abnormally dilated vessel channels with heterogenous mass suggestive of retained products of conception with AV malformations or invasive mole. B-hcg levels were low 22.7miu/ml.

After admission to our institute we also attempted D&C but patient started bleeding profusely, the procedure was abandoned and decision for hysterectomy was taken. High index of suspicion of acquired AV malformations may avert the catastrophic bleed triggered by D&C in such type of patients.

Joseph A et al reported a case with a heavy intractable bleeding per vaginum, following dilatation and curettage for an incomplete abortion. A provisional clinical diagnosis of gestational trophoblastic disease was made. After radiological investigations this was diagnosed as uterine Arterio-venous malformation. The patient was treated by uterine artery embolization, because she wanted to preserve the fertility. (4)

Arora R. et al reported three cases of uterine AV malformations with recurrent vaginal bleeding. One case presented with bleeding three weeks after MTP. Repeat D&C was done with the diagnosis of incomplete abortion which landed up in massive torrential bleeding for which she was transfused three units of blood. With the suspicion of AV malformation color Doppler study done which confirmed the diagnosis.(5)

These case report studies shows that patient presenting with recurrent bleeding after D&C, One should have high index of suspicion of AV malformations and should be confirmed by color Doppler study prior to repeat D&C. The usual diagnosis in such type of patients with recurrent bleeding is either incomplete abortion or gestational trophoblastic disease. B-Hcg levels will exclude the diagnosis of Gestational Trophoblastic Disease.

Conclusion

Uterine Arterio-venous malformations are rare lesions with a considerable risk potential. Recurrent or massive life-threatening vaginal bleeding may occur. D & C procedure may further worsen the situation if the condition is not diagnosed. High index of Clinical suspicion is essential for a prompt diagnosis and treatment.

References

Illustrations

Illustration 1

Fig 1 Ultrasound showing retained products of conception with AV Malformations

![Ultrasound showing retained products of conception with AV Malformations](image1)

Illustration 2

Fig 2 Color doppler showing retained products of conception with AV Malformations

![Color doppler showing retained products of conception with AV Malformations](image2)
Disclaimer

This article has been downloaded from WebmedCentral. With our unique author driven post publication peer review, contents posted on this web portal do not undergo any prepublication peer or editorial review. It is completely the responsibility of the authors to ensure not only scientific and ethical standards of the manuscript but also its grammatical accuracy. Authors must ensure that they obtain all the necessary permissions before submitting any information that requires obtaining a consent or approval from a third party. Authors should also ensure not to submit any information which they do not have the copyright of or of which they have transferred the copyrights to a third party.

Contents on WebmedCentral are purely for biomedical researchers and scientists. They are not meant to cater to the needs of an individual patient. The web portal or any content(s) therein is neither designed to support, nor replace, the relationship that exists between a patient/site visitor and his/her physician. Your use of the WebmedCentral site and its contents is entirely at your own risk. We do not take any responsibility for any harm that you may suffer or inflict on a third person by following the contents of this website.
Reviews

Review 1

Review Title: Review of AV malformation after pregnancy termination

Posted by Dr. Roger C Young on 02 Dec 2011 06:57:22 PM GMT

<table>
<thead>
<tr>
<th></th>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Is the subject of the article within the scope of the subject category?</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>Are the interpretations / conclusions sound and justified by the data?</td>
<td>Partly</td>
</tr>
<tr>
<td>3</td>
<td>Is this a new and original contribution?</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>Does this paper exemplify an awareness of other research on the topic?</td>
<td>Yes</td>
</tr>
<tr>
<td>5</td>
<td>Are structure and length satisfactory?</td>
<td>Yes</td>
</tr>
<tr>
<td>6</td>
<td>Can you suggest brief additions or amendments or an introductory statement that will increase the value of this paper for an international audience?</td>
<td>Yes</td>
</tr>
<tr>
<td>7</td>
<td>Can you suggest any reductions in the paper, or deletions of parts?</td>
<td>Yes</td>
</tr>
<tr>
<td>8</td>
<td>Is the quality of the diction satisfactory?</td>
<td>Yes</td>
</tr>
<tr>
<td>9</td>
<td>Are the illustrations and tables necessary and acceptable?</td>
<td>Yes</td>
</tr>
<tr>
<td>10</td>
<td>Are the references adequate and are they all necessary?</td>
<td>No</td>
</tr>
<tr>
<td>11</td>
<td>Are the keywords and abstract or summary informative?</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Rating: 2

Comment:

This paper presents the case of vaginal bleeding after medical termination of pregnancy (MTP) that is unresponsive to standard therapy. The diagnosis of AV malformation is made at ultrasound, but a hysterectomy is required to stop life-threatening hemorrhage. In general, this case was handled to a high international standard of care only if the patient did not desire future childbearing. No mention of childbearing desires is made in the case presentation. Optimal care would likely have minimized blood transfusions, also.

The point regarding a negative urine pregnancy test to rule out molar pregnancy is good, but explanation of the low level positive was not addressed, until the path returned products of conception.

The diagnosis of AV malformation is in doubt since pathology failed to reveal such structure. Indeed, Jain and Fogata in 2007 described retained POC minicking AVM (J Clin Ultrasound 2007 jan; 35(1):42-7. More detail should be given to convince the reader this indeed was an AVM.

The text should describe the optimal way to assess bleeding after 2 D+C, then how to avoid multiple transfusions prior to hysterectomy.

The sentence with the phrase “received 3 units of blood” is duplicated and this should be corrected.

Competing interests: none

Invited by the author to make a review on this article? : No

Experience and credentials in the specific area of science:
Professor of Obstetrics and Gynecology at University of Vermont. Clinician and academic researcher.

Publications in the same or a related area of science: No
How to cite: Young R. Review of AV malformation after pregnancy termination [Review of the article 'Arterio-Venous Malformations and Retained Products of Conception: A Case Report and Brief Review' by ]. WebmedCentral 1970;2(12):REVIEW_REF_NUM1191
Review 2

Review Title: [http://www.webmedcentral.com/article_view/2204](http://www.webmedcentral.com/article_view/2204)

Posted by Dr. Sunita Gupta on 16 Sep 2011 05:28:38 PM GMT

<table>
<thead>
<tr>
<th>Question</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the subject of the article within the scope of the subject category?</td>
<td>Yes</td>
</tr>
<tr>
<td>Are the interpretations / conclusions sound and justified by the data?</td>
<td>Yes</td>
</tr>
<tr>
<td>Is this a new and original contribution?</td>
<td>No</td>
</tr>
<tr>
<td>Does this paper exemplify an awareness of other research on the topic?</td>
<td>Yes</td>
</tr>
<tr>
<td>Are structure and length satisfactory?</td>
<td>No</td>
</tr>
<tr>
<td>Can you suggest brief additions or amendments or an introductory statement that will increase the value of this paper for an international audience?</td>
<td>No</td>
</tr>
<tr>
<td>Can you suggest any reductions in the paper, or deletions of parts?</td>
<td>No</td>
</tr>
<tr>
<td>Is the quality of the diction satisfactory?</td>
<td>Yes</td>
</tr>
<tr>
<td>Are the illustrations and tables necessary and acceptable?</td>
<td>Yes</td>
</tr>
<tr>
<td>Are the references adequate and are they all necessary?</td>
<td>Yes</td>
</tr>
<tr>
<td>Are the keywords and abstract or summary informative?</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Rating: 6

Comment:
post abortion AV malfortion of the uterus is a common cause of abnormal uterine bleeding now a days. failure to available medical management results in lifesaving hysterectomies even in younger patients. minimal invasive surgeries like embolisation etc are other options for the treatment of this condition. there is need for trial of some other drugs so that this condition can be managed conservatively.

Competing interests: no

Invited by the author to make a review on this article? : No

Experience and credentials in the specific area of science:
10 years

Publications in the same or a related area of science: No

Disclaimer

This article has been downloaded from WebmedCentral. With our unique author driven post publication peer review, contents posted on this web portal do not undergo any prepublication peer or editorial review. It is completely the responsibility of the authors to ensure not only scientific and ethical standards of the manuscript but also its grammatical accuracy. Authors must ensure that they obtain all the necessary permissions before submitting any information that requires obtaining a consent or approval from a third party. Authors should also ensure not to submit any information which they do not have the copyright of or of which they have transferred the copyrights to a third party.

Contents on WebmedCentral are purely for biomedical researchers and scientists. They are not meant to cater to the needs of an individual patient. The web portal or any content(s) therein is neither designed to support, nor replace, the relationship that exists between a patient/site visitor and his/her physician. Your use of the WebmedCentral site and its contents is entirely at your own risk. We do not take any responsibility for any harm that you may suffer or inflict on a third person by following the contents of this website.