Medical management of ectopic pregnancy with high HCG levels: a case series

Leili Safdarian, M.D.
Elaheh Mossayebi, M.D.
Bita Badehnoosh, M.D.

Department of obstetrics and gynecology, Shariati Hospital, Tehran University of Medical Sciences, Tehran, Iran

ABSTRACT

Objective: To evaluate the efficacy of medical management of ectopic pregnancy with high HCG levels.
Design: Case series.
Setting: A teaching hospital in Tehran University.
Materials and Methods: Selecting 6 patients with unruptured ectopic pregnancy and HCG levels above 12000 IU/L to be managed medically.
Results: All patients were managed successfully.
Conclusion: In selected patients with high pre-treatment HCG levels medical management may be successful and that high HCG level is not a contraindication for medical management by itself.
Keywords: Ectopic pregnancy, HCG level, Medical management

INTRODUCTION

Ectopic pregnancy (EP) remains a leading cause of maternal mortality and morbidity in early pregnancy (1). Medical therapy has an established place in the treatment of ectopic pregnancy, and in selected patients it appears to be as effective as surgery (2). There are numerous reports describing successful treatment of all varieties of ectopic pregnancy using a number of methotrexate (MTX) regimens. It is clear that many woman with an ectopic pregnancy are not suitable for medical therapy. Active intra abdominal hemorrhage is a contraindication. The size of the mass is also important. But what about human chorionic gonadotropin (HCG) level? HCG has been identified as an accurate marker of the trophoblastic tissue vitality but the importance of the pre-treatment level of HCG for the success of therapy is still unclear (3). Some reports indicate that with HCG levels above 4000 IU/L success rate falls to 35% (2). But successful treatment has been reported even with the HCG level of 38270 IU/L (4). We report 6 patients with HCG levels above 12000 IU/L that were managed medically.

MATERIALS AND METHODS

Six hemodynamically stable patients with HCG levels above 12000 IU/L were selected. Ectopic pregnancy was proven in all of them with high HCG level plus sonographic findings. All the patients signed inform consent and were admitted in the hospital. HCG level was measured once before therapy and then according to variable dose
Table 1. Characteristics of treated patients.

<table>
<thead>
<tr>
<th>Patient</th>
<th>Age</th>
<th>Chief complaint</th>
<th>Sonographic findings</th>
<th>Pretreatment HCG</th>
<th>MTX doses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>38</td>
<td>Mild abdominal pain</td>
<td>40*40 mm left adnexal mass</td>
<td>22700</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>25</td>
<td>spotting</td>
<td>15*25 mm mass in left tube</td>
<td>26900</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>29</td>
<td>Abdominal pain + spotting</td>
<td>25*30 mm mass in left tube</td>
<td>12000</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>23</td>
<td>-</td>
<td>20*30 mm mass in right tube</td>
<td>15700</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>40</td>
<td>-</td>
<td>27*17 mm mass in right tube with gestational sac</td>
<td>15800</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>31</td>
<td>spotting</td>
<td>Interstitial EP</td>
<td>43000</td>
<td>5</td>
</tr>
</tbody>
</table>

MTX therapy regimen. In this regimen MTX was injected 1 mg/kg IM in days 1,3,5,7 and leukoverin was injected 0.1 mg/kg in the days 2,4,6,8. HCG level was measured every 48 hours and if a decrease of more than 15 percent was seen, the injections were stopped and then HCG measured weekly there after until it was under 10 IU/L. The characteristics of patients are summarized in Table 1. None of the patients needed surgery and it lasted at most 53 days from the beginning of treatment to the HCG level of less than 10 IU/L.

CONCLUSION

Although a higher level of HCG shows more invasion of trophoblastic cells into the tissue, no limit has been identified for medical treatment success yet. According to the reported cases, it seems that HCG level may not be a contraindication for medical management of ectopic pregnancy. None of our patients needed surgery but more attention should be paid to the patients with high HCG level that are managed medically. So it is of our interest to say that if a patient is hemodynamically stable and is not a candidate for other abdominal operations may be treated medically regardless of HCG level. However more studies, preferably randomized clinical trials in this field is recommended to evaluate the success rate of medical management of ectopic pregnancy with high HCG level.

In addition, considering MTX effects on ovarian function and higher amounts of MTX used in high HCG level patients, we recommend not only to study success rate, but also ovarian function after therapy so that a medical management for ectopic pregnancy does not cost a premature ovarian failure.

ACKNOWLEDGEMENT

The authors thank Dr. Aleyasin, Dr. Aghahosseini and Dr. Khademi for their help and support.

REFERENCES


Received on December 13, 2006; revised and accepted on May 13, 2007