Severe Septic Complications of Acute Fatty Liver of Pregnancy: Case Series in Assiut university women Health hospital

Ahmed Kamel Bakry, MBBCh, Noha A mousa, MD, PhD
Women Health Hospital, Assiut University, Egypt

BACKGROUND

- Acute fatty liver of pregnancy (AFLP) is a fatal disease.
- Affects 1 in 7000 to 16,000 pregnancies.
- The disease has been associated with significant maternal and neonatal mortalities and morbidities.
- Maternal mortality decreased from 75% to 18% in certain centers.
- Neonatal mortality also decreased from almost 85% to around 23%.
- Risk factors include primigravida, multiple pregnancies and pregnancy with a male fetus.
- The disease often presents in the third trimester (average is 37-38 weeks) however, some cases were reported to occur earlier in the second trimester.

Clinical and biochemical criteria for the Diagnosis of AFLP

Six or more of the criteria shown in this Table are adequate enough for diagnosis:

<table>
<thead>
<tr>
<th>Clinical presentation</th>
<th>Vomiting</th>
<th>Abdominal pain</th>
<th>Polydypsia</th>
<th>Polyuria</th>
<th>Encaphalopathy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liver study</td>
<td>Elevated bilirubin (&gt;14 μmol/l)</td>
<td>Elevated transaminases</td>
<td>Ultrasound bright liver</td>
<td>Ultrasound Ascites</td>
<td>Liver biopsy microvascular steatosis</td>
</tr>
<tr>
<td>Renal study</td>
<td>Proteinuria (&gt;940 mg/dl)</td>
<td>Creatinine &gt;150 μmol/l</td>
<td>Elevated ammonia &gt;47 μmol/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood study</td>
<td>Hyperglycemia &gt;14 mmol/l</td>
<td>Leukocytosis &gt;15 x 10⁹/l</td>
<td>Coagulopathy</td>
<td>PT &gt;16 sec</td>
<td>INR &gt;1.64</td>
</tr>
</tbody>
</table>

*We present four women with acute fatty liver of pregnancy who had septic foci in different regions of the body.

Patient(1)

AFLP with Liver Abscess

A 19 years old female, Para1-0 presented to our hospital emergency room after normal delivery at private clinic with acute abdominal pain. Abdominal examination showed significant tenderness on both the epigastor and the right hypochondrial areas.

Hematological investigations were suggestive of coagulopathy with mildly elevated liver enzymes.

The patient was immediately transferred to our intensive care unit (ICU).

5 days later, patient was discharged after improvement of her investigation and general condition.

One day later after discharge, she developed a high grade fever. The abdominal ultrasound showed that the liver was enlarged with 5 large hypchoecic lesions suggestive of large liver abscesses. Percutaneous abscess drainage under ultrasound guidance was used using a large-bore catheter after gastrotrostenography and patient started to improve and transferred to gastrotrostenography unit was done.

Patient(2)

AFLP with Brain Abscess

A young parous female in her twenties, P4+01 who was pregnant of 32 weeks presented to our emergency unit with severe abdominal pain. Abdominal examination showed hard tender uterus. There was a difficulty palpating the fetal parts and the fetal heart sounds were inaudible. Per vaginal examination showed bloody stained vaginal discharge. Induction of labor was started. She developed massive post partum partum hemorrhage and routine measures failed. A Sengstaken tube was inserted into the uterus and bleeding was eventually controlled. The patient was transferred to our intensive care (ICU) where she developed hepato-renal failure and received one session of plasma exchange, she then significantly improved.

11 days later, patient was discharged after improvement of her investigation and general condition.

Two days post ICU discharge, she developed high grade fever that fluctuated over several days.

Empirical broad spectrum antibiotic and antipretic treatment was used when the cause of pyrexia was not conclusive urinary tract infection was suspected first.

After fever was controlled, drowsiness and occasional vomiting was a recurrent complaint. Severe headaches also occurred and some hypotension.

The patient was again transferred to ICU. Neurological consultation and a CT and MRI were done which showed multiple small brain abscesses.

Patient was eventually transferred to Neurological intensive care unit (ICU) in which she died in less than 24 hours after transfer and after one month of her initial admission.

Patient(3)

AFLP and Infected Pulmonary/Venous Thrombosis

A 21 years of primigravida at 32 weeks pregnancy was presented to our emergency room with jaundice. Patient developed acute abdominal pain(epigastor and right hypochondrial), dark urine and nausea.

Elevated liver enzymes and borderline blood sugar and high bilirubin were detected. AFLP was suggested, and termination by C.S was done.

3 days after CS, patient showed a disturbed consciousness level, flapping tremors, ascitis, lower limb oedema. She developed hepato-renal failure.

Signs of coagulopathy were observed including significant abdominal wall cellulites and echomosis around the wound.

Patient(4)

AFLP with a Pelvi-abdominal Abscess

A 26 years old female, P4+0 delivered at private clinic by cesarean section.

9 days later, Patient was admitted by jaundice and shock at our Reception unit.

Abdominal ultrasound shows enlarged bright liver and mild ascites. Elevated liver enzymes and borderline blood sugar and high bilirubin were detected. After correction of the shock patient became stable and was followed up be serial investigations.

4 days later, patient developed high grade fever and abdominal pain. Abdominal ultrasound showed huge pelvic abscess. The patient was referred to the radiology unit and Pigtal catheter was inserted under ultrasound guidance for abscess drainage and patient improved over one month.

CONCLUSION

- In this case series, we demonstrate an association between AFLP and severe pyogenic infections of major body systems.
- Acute fatty liver may be associated with serious infectious complication.
- Early aggressive search and management of infection warranted but the prognosis depends on the location of infection.
- Further studies are needed to explore the causes and risk factors that predispose to such serious complications.

ACKNOWLEDGEMENT

- Mentor-Student Research Program by Healthcare Reform Egypt.
- I would like to thank Dr. Mohamed Fathalia for review and Dr Ahmed Yehia for his help in obtaining clinical data related to the study.
- Illustrations are obtained from medscape, findlaw, ADAM and medgeo.

HRE Research Link Program

Severe Septic Complications of Acute Fatty Liver of Pregnancy: Case Series in Assiut university women Health hospital

Ahmed Kamel Bakry, MBBCh, Noha A mousa, MD, PhD
Women Health Hospital, Assiut University, Egypt