**Pre-eclampsia**

Study Group Module

**Learning Objectives**

Review the following Learning Objectives as an organized beginning to your study of this module. As you read the Learning Objectives, note key words which will aid you in finding the information in the texts. When you complete the module, revisit this list and check for areas that require further investigation.

* Review the Hypertension module.
* Define pre-eclampsia and eclampsia.
* Identify the effects of PIH and pre-eclampsia on placental function, and the resulting effects on the fetus.
* Identify the triad of symptoms used to diagnose pre-eclampsia, and the additional symptoms and their causes.
* Understand the basis for prevention of pre-eclampsia.
* Identify techniques for treatment of pre-eclampsia.
* Identify lab work useful in the screening of pre-eclampsia.
* Identify the apparently increased risk of gestational diabetes present with developing pre-eclampsia.
* Learn about related syndromes: HELLP, DIC.
* Review the Nutrition module.
* Review the Liver module.

**Study Sources**

The following texts are recommended for completion of this module. Use them to cross reference and build a more comprehensive understanding.

Using key words from the Learning Objectives, search the index. Read those pages listed, and read the chapter in which they are found. Establish a context for the information so that you understand how other topics are related. In addition, read the chapter headings in the Table of Contents, and flip through each text to familiarize yourself with the content of chapters. As you work through Study Group modules, you will eventually read each text in its entirety.

* Holistic Midwifery, Vol. I, II, III (when available), Frye
* Understanding Diagnostic Tests in the Childbearing Year, Frye
* Varney’s Midwifery
* Myles Textbook for Midwives
* Nutritional Almanac, Kirschmann
* Herbal for the Childbearing Year, Weed

**Related Topics**

* Physical Assessment
* Nutrition and exercise
* Hypertension
* Liver
* Gestational Diabetes
* Uterine Size and EDD Discrepancies

**Pre-eclampsia Questions**

1. Define pre-eclampsia and eclampsia.
2. How often does pre-eclampsia occur?
3. When does pre-eclampsia onset?
4. What are the triad of symptoms used to diagnose pre-eclampsia?
5. What additional symptoms of pre-eclampsia are commonly screened for?
6. Which pre-eclamptic symptoms are resulting from central nervous system effects?
7. What can you tell from the hemoglobin and hematocrit levels of a pregnant woman in terms of her risk for pre-eclampsia?
8. What effect does a restricted salt diet have on blood volume?
9. What effect may PIH conditions have on the placenta?
10. What is the best prevention of pre-eclampsia?
11. What effect does stress have on the increased risk for pre-eclampsia?
12. Why does the consumption of enough protein but too few calories contribute to pre-eclampsia?
13. What is the RDA of calories for pregnant women?
14. How much fluid intake does a pregnant woman require?
15. What are some non-allopathic techniques for treatment of pre-eclampsia?
16. What lab work is useful in the screening of pre-eclampsia?
17. If a pregnant woman is being screened for pre-eclampsia, what other pregnancy induced condition is she at risk for?
18. What is the allopathic response and treatment of pre-eclampsia?
19. What does the acronym DIC represent, and what are the implications?
20. What is HELLP syndrome?
21. What do you think?

22. Your client has a usual American diet: pretty lousy. She’s working on it, and in fact it has improved considerably. You encourage her to do the usual pregnancy support with herbs, she is reluctant but eventually does follow your suggestions. At each visit you inquire about edema, headaches, visual disturbances, and other indicated pre-eclamptic signs. Everything appears normal. All abnormal findings are listed. Look over her chart and see what you think.

Your client at her 15 week visit has a BP 110/72.

 17 wks BP 102/70

 21 wks BP 130/76 edema, will begin usual liver support

 24 wks BP 128/76

 27 wks BP 118/72

 29 wks BP 130/82

 31 wks BP 130/72

 33 wks BP 128/88, 122/74 after rest on side, discussed modified bed rest and reviewed liver support, which has fallen off her daily routine.

 35 wks BP 130/84, 120/72 after rest on side

 36 wks BP 122/80, +2 edema, Continuing liver support & rest

 37 wks BP 120/82

 38 wks BP 144/88, 134/74 after rest on side. no protein in urine, Labs done for liver panel, all labs normal.

 39 wks BP 122/84, 120/76 laying down

 40 wks BP 132/84, 140/100 standing, 122/84 lying

 40 1/2 wks BP 144/82

 At the 40 1/2 wk visit, you hear a deceleration in the baby’s heart rate. The decel goes from 150’s to 100, lasts about 30 seconds and recovers. Your sense of her is that something could be up; you haven’t entirely relaxed about her BPs. You consult with the local hospital OB and she recommends a biophysical profile.

You all go in together for the BPP and it is normal. However, at the hospital her blood pressure is in the 130’s over 80’s. The OB discusses pre-eclampsia with your client and presses for an induction. The parents are now quite concerned. They agree to induction.

 Once Pitocin is started, contractions begin slowly. Her BPs are no higher than 140/90. She is 2cm dilated 16 hours into the induction. An OB comes into the room to tell your client that the hospital protocol for someone induced for pre-eclampsia is to administer mag sulfate by IV; they want to start that medication now. Your client still has no protein in her urine, her BP is now 146/80, with slight edema on her ankles. You argue that she wasn’t induced for pre-eclampsia, only for the risk of it with her borderline BP. The woman is not concerned with the course of events and doesn’t offer any resistance to the impending medication. The mag is started.

 She dilates to 7 cm in the next ten hours. When the baby begins having decels to 100, she is put on oxygen. Her BP 169/83, 200/ 98 sitting upright. Another drug is given to bring down her BP and it never again rises above 160/88. Five hours later her contractions have spaced out. The Pitocin is halved, then increased again. An internal pressure catheter is inserted. Seven hours later she is completely dilated!

 The Pitocin IV is as high as they can set it. The pit/mag combination is slowing everything. She pushes for four hours with slow progress but she keeps at it and you keep convincing the OBs she is making progress. The FHT are looking flat with some decels to the 90’s. The OB decides to try the vacuum extractor; four attempts bring the baby out.

 She has a third degree extended episiotomy with a bleeder that is tied off as soon as the birth permits. When her placenta doesn’t come after one hour, a manual removal is done. Her total estimated blood loss is 800 cc, almost all of it with the manual removal.

 The whole induction lasted about 52 hours. Your client is happy with her baby and not really curious or upset with anything that transpired during her labor and birth. She doesn’t like the puffy edema that remains for 5 days after the mag IV is removed, but otherwise she is quite agreeable. Her post partum hct. is 25.3. Her husband is wildly relieved that nothing bad happened.

23. What do you think about this scenario? Do you think she was pre- eclamptic?

24. Projects (send completed projects with the rest of your course work for this module)

Using the food checklists in Holistic Midwifery, Vol. I, pages 236-243, review a client’s diet journal. Make recommendations based on your assessment.

25. Identify the lab services in your area and their screening panels you would utilize for ruling out or diagnosing pre-eclampsia.

26. Draft practice guidelines for screening for and responding to indications of pre-eclampsia in your own practice. Include reference to nutritional counseling, herbal support, lab work, your consultation and transport plan. Submit this draft and include it later in your Practice Guidelines projects (in the Charting and Practice Guidelines Module.)

**Skills**

Following are excerpts from the NMI forms for assessment of midwifery skills, which include all skills identified and required by NARM. Review the following skills and consider how they each relate to the content of this module. If you are currently working with a preceptor, take this opportunity to focus on these areas. During Supervised Primary Care you will formally evaluate these skills together using the NMI form Preceptor Evaluation/Student Self-Assessment of Midwifery Skills.

2. General Health care Skills:

 F. Uses alternate health care practices (non-allopathic treatments) and modalities

 1. Herbs 2. Hydrotherapy (baths, compresses, showers, etc.)

 2. General Health care Skills:

 G. Refers to alternate health care practitioners for non-allopathic treatments

3. Maternal Health Assessment:

 K. Recognizes and responds to potential prenatal complications by

 1. Identifying pregnancy-induced hypertension

 2. Assessing, educating and counseling for pregnancy-induced hypertension with:

 a) nutritional/hydration assessment,

 b) Administration of clacium/magnesium supplement,

 c) stress assessment and management, d)non-allopathic remedies,

 e) monitoring for signs/symptoms of increased severity,

 f) assessment for drug abuse,

 g) increased frequency of maternal assessment

 3. Identifying preeclampsia

 4. Collaborating and managing preeclamptic mothers