Answer paper

Examination: MEDSEM9_H15_ORD

Assessment: MEDSEM9_STATION20_H15_ORD

Part 1:

A 2-year old girl with parents from Turkey was admitted to the Emergency Ward because of pallor. Her weight and height were at the 10 percentile, and her head circumference at the 25 percentile. She was in good condition, and the clinical exam was otherwise normal without signs of icterus, fever, lymphopathy or hepatosplenomegaly. Haemoglobin was 7, 8 g/100ml (11.3-12.3).

Question 1:

Determine the likelihood of each of the following diagnoses:

Rickets [pull-down menu]
Leukaemia [pull-down menu]
Haemoglobinopathies [pull-down menu]
Urinary tract infection [pull-down menu]
TEC (Transitory erythroblastopenia of childhood) [pull-down menu]
Iron deficiency anaemia [pull-down menu]
Hemolytic anemia [pull-down menu]

Answer:

Rickets = **Unlikely**
Leukaemia = **Unlikely**
Haemoglobinopathies = **Likely**
Urinary tract infection = **Unlikely**
TEC (Transitory erythroblastopenia of childhood) = **Unlikely**
Iron deficiency anaemia = **Likely**
Hemolytic anemia = **Unlikely**

Part 2:

A 2-year old girl with parents from Turkey was admitted to the Emergency Ward because of pallor. Her weight and height were at the 10 percentile, and her head circumference at the 25 percentile. She was in good condition, and the clinical exam was otherwise normal without signs of icterus, fever, lymphopathy or hepatosplenomegaly. Haemoglobin was 7, 8 g/100ml (11.3-12.3).
The most likely diagnoses are haemogobinopathy or iron deficiency anemia. During a more detailed interview, the parents told you that her mother, father, and her older sister had microcytic anaemia. The patient attends kindergarten and is doing well.

Question 1:

In addition to Hb, WBC w/diff.count and platelets, which three of the following alternatives of tests are most appropriate at this point of the diagnostic process?

- ☐ MCH, MCV (Mean Corpuscular Haemoglobin and Volume)
- ☐ Bone marrow examination
- ☐ Haemoglobin electrophoresis
- ☐ Endoscopy with intestinal biopsy
- ☐ CRP (C-reactive protein)
- ☐ Serum ferritin and transferrin saturation
- ☐ Vitamin-D status
- ☐ Urine microscopy

Answer:

MCH, MCV (Mean Corpuscular Haemoglobin and Volume)
Haemoglobin electrophoresis
Serum ferritin and transferrin saturation

Part 3:

A 2-year old girl with parents from Turkey was admitted to the Emergency Ward because of pallor. Her weight and height were at the 10 percentile, and her head circumference at the 25 percentile. She was in good condition, and the clinical exam was otherwise normal without signs of icterus, fever, lymphopathy or hepatosplenomegaly. Haemoglobin was 7, 8 g/100ml (11.3-12.3). The most likely diagnoses are haemogobinopathy or iron deficiency anemia. During a more detailed interview, the parents told you that her mother, father, and her older sister had microcytic anaemia. The patient attends kindergarten and is doing well.
The most appropriate tests are MCH, MCV, Haemoglobin electrophoresis, serum ferritin and transferrin saturation.
The initial tests showed: Hb 7,8 g/100 ml (11.3-12-3), WBC 8.9 x109/l (6.0-10.0) granulocytes 55% (40-60) lymphocytes 35% (30-50), platelets 263 x 109/l (150-400), MCV 20,5 (27 – 32), MCH 62 (75 – 90). Reticulocytes 155 x109 (30 – 100). The following results were normal: CRP, haptoglobin, ferritin and transferrin saturation. Other tests have not been reported yet.

Question 1:

Re-evaluate the likelihood of each of the following diagnoses.

Rickets [pull-down menu]
Leukaemia [pull-down menu]
Haemoglobinopathies [pull-down menu]
Urinary tract infection [pull-down menu]
TEC (Transitory erythroblastopenia of childhood) [pull-down menu]
Iron deficiency anaemia [pull-down menu]
Haemolytic anemia [pull-down menu]

Answer:

Rickets = **Unlikely**
Leukaemia = **Unlikely**
Haemoglobinopathies = **Likely**
Urinary tract infection = **Unlikely**
TEC (Transitory erythroblastopenia of childhood) = **Unlikely**
Iron deficiency anaemia = **Unlikely**
Haemolytic anemia = **Unlikely**

Part 4:

A 2-year old girl with parents from Turkey was admitted to the Emergency Ward because of pallor. Her weight and height were at the 10 percentile, and her head circumference at the 25 percentile. She was in good condition, and the clinical exam was otherwise normal without signs of icterus, fever, lymphopathy or hepatosplenomegaly. Haemoglobin was 7, 8 g/100ml (11.3-12.3). The most likely diagnoses are haemogobinopathy or iron deficiency anemia. During a more detailed interview, the parents told you that her mother, father, and her older sister had microcytic anaemia. The patient attends kindergarten and is doing well. The most appropriate tests are MCH, MCV, Haemoglobin electrophoresis, serum ferritin and transferrin saturation. The initial tests showed: Hb 7,8 g/100 ml (11.3-12-3), WBC 8.9 x109/l (6.0-10.0) granulocytes 55% (40-60) lymphocytes 35% (30-50), platelets 263 x 109/l (150-400), MCV 20,5 (27 – 32), MCH 62 (75 – 90). Reticulocytes 155 x109 (30 – 100). The following results were normal: CRP, haptoglobin, ferritin and transferrin saturation. Other tests have not been reported yet.
The most likely diagnose is haemoglobinopathy. Later on, the haemoglobin electrophoresis showed that she is homozygous for a beta + mutation witch has given her a beta – thalassemia major. The whole family has made an appointment at the outpatient clinic, and they are informed about the diagnosis.

Question 1:

What will you inform the family about this disease?

There is a 25 % risk for their next child to get a severe variant (major) [pull-down menu]
Thalassemic red blood cells offer innate protection against Leishmaniasis [pull-down menu]
Both her mother and her father have thalassemia [pull-down menu]
Either her mother or her father has thalassemia [pull-down menu]
Her haemoglobin will not increase following iron supplementation [pull-down menu]
Patient with a beta – thalassemia major are treated with regular blood transfusions [pull-down menu]

Answer:

There is a 25 % risk for their next child to get a severe variant (major) = **Likely**
Thalassemic red blood cells offer innate protection against Leishmaniasis = **Unlikely**
Both her mother and her father have thalassemia = **Likely**
Either her mother or her father has thalassemia = **Unlikely**
Her haemoglobin will not increase following iron supplementation = **Likely**
Patient with a beta – thalassemia major are treated with regular blood transfusions = **Likely**

Part 5:

A 2-year old girl with parents from Turkey was admitted to the Emergency Ward because of pallor. Her weight and height were at the 10 percentile, and her head circumference at the 25 percentile. She was in good condition, and the clinical exam was otherwise normal without signs of icterus, fever, lymphopathy or hepatosplenomegaly. Haemoglobin was 7, 8 g/100ml (11.3-12.3). The most likely diagnoses are haemogobinopathy or iron deficiency anemia. During a more detailed interview, the parents told you that her mother, father, and her older sister had microcytic anaemia. The patient attends kindergarten and is doing well. The most appropriate tests are MCH, MCV, Haemoglobin electrophoresis, serum ferritin and transferrin saturation. The initial tests showed: Hb 7,8 g/100 ml (11.3-12-3), WBC 8.9 x109/l (6.0-10.0) granulocytes 55% (40-60) lymphocytes 35% (30-50), platelets 263 x 109/l (150-400), MCV 20,5 (27 – 32), MCH 62 (75 – 90). Reticulocytes 155 x109 (30 – 100). The following results were normal: CRP, haptoglobin, ferritin and transferrin saturation. Other tests have not been reported yet. The most likely diagnose is haemoglobinopathy. Later on, the haemoglobin electrophoresis showed that she is homozygous for a beta + mutation witch has given her a beta – thalassemia major. The whole family has made an appointment at the outpatient clinic, and they are informed about the diagnosis.
Thalassemia is a recessively inherited disease and there is a 25 % risk that the parent's next child to get a severe variant. It is likely that both parents have the disease. Her haemoglobin will not increase following iron supplementation, and patients with a beta – thalassemia major are treated with regularly blood transfusions.
Six years later she was diagnosed with a brain tumour (Medulloblastoma) and she was operated on, treated with radiotherapy (CNS axis 23, 5 Gy, boost to cerebellum 30, 6 Gy, totally 54 Gy) and given cytotoxic drugs for 12 months. She was followed clinically for five years with no sign of relapse.

Question 1:

How will you estimate her risk of encountering the following problems as a young adult?

Cognitive problems [pull-down menu]
Thyroid gland dysfunction [pull-down menu]
Cardiac arrhythmias [pull-down menu]
Fatigue [pull-down menu]
Hearing problems [pull-down menu]
Liver failure [pull-down menu]
Cancer [pull-down menu]

Answer:

Cognitive problems = **Increased**
Thyroid gland dysfunction = **Increased**
Cardiac arrhythmias = **Close to normal**
Fatigue = **Increased**
Hearing problems = **Increased**
Liver failure = **Close to normal**
Cancer = **Increased**

Assessment: MEDSEM9_STATION23_H15_ORD

Part 1:

You are a general practitioner. A 32-year-old woman in her first pregnancy presents at your office. She is 30 weeks pregnant. She has gained 3 kilos during the last two weeks. Otherwise, she has no complaints. She feels a lot of fetal movement. Her blood pressure is 145/95 mm Hg and there are no traces of proteinuria on her urine dipstick. You measure the symphysis-fundal height to be in the normal range.

Question 1:

What do you do?

- Schedule a new visit at your office within 3–5 days AND ask her to contact you if alarming changes (no fetal movements, dyspnoe, abdominal pain etc)
- New visit in your office within two weeks
- Referral to hospital today
- Referral to hospital within a week

Answer:

Schedule a new visit at your office within 3–5 days AND ask her to contact you if alarming changes (no fetal movements, dyspnoe, abdominal pain etc)

Part 2:

You are a general practitioner. A 32-year-old woman in her first pregnancy presents at your office. She is 30 weeks pregnant. She has gained 3 kilos during the last two weeks. Otherwise, she has no complaints. She feels a lot of fetal movement. Her blood pressure is 145/95 mm Hg and there are no traces of proteinuria on her urine dipstick. You measure the symphysis-fundal height to be in the normal range.
At the visit 4 days later, her blood pressure is 150 /95, and the urine dipstick has protinuria +2 and she is complaining about epigastric discomfort.

Question 1:

What is the most likely diagnosis? (1-2 lines)

Answer:

Correct answer: HELLP syndrome (6 p) or Preeclampsia and HELLP syndrome (6 p).
If only Preeclampsia is mentioned (3 p)

Part 3:

You are a general practitioner. A 32-year-old woman in her first pregnancy presents at your office. She is 30 weeks pregnant. She has gained 3 kilos during the last two weeks. Otherwise, she has no complaints. She feels a lot of fetal movement. Her blood pressure is 145/95 mm Hg and there are no traces of proteinuria on her urine dipstick. You measure the symphysis-fundal height to be in the normal range. At the visit 4 days later, her blood pressure is 150 /95, and the urine dipstick has protinuria +2 and she is complaining about epigastric discomfort.
Blood samples give you the diagnosis of HELLP syndrome.

Question 1:

What does the acronym HELLP mean? (1-2 lines)

Answer:

Correct answer: Hemolysis (2) Elevated Liver enzymes (2) Low Platelets (2)

Question 2:

What do you do next?

- Referral to hospital within 1-3 days
- Prompt referral to hospital
- New visit to your office within 2 days
- New visit to your office within 1 week

Answer:

Prompt referral to hospital

Part 4:

You are a general practitioner. A 32-year-old woman in her first pregnancy presents at your office. She is 30 weeks pregnant. She has gained 3 kilos during the last two weeks. Otherwise, she has no complaints. She feels a lot of fetal movement. Her blood pressure is 145/95 mm Hg and there are no traces of proteinuria on her urine dipstick. You measure the symphysis-fundal height to be in the normal range. At the visit 4 days later, her blood pressure is 150 /95, and the urine dipstick has protinuria +2 and she is complaining about epigastric discomfort. Blood samples give you the diagnosis of HELLP syndrome.
The patient arrives at the hospital. The blood tests confirm HELLP syndrome: Hgb 12,5 (ref 11-14 g/dl), Thombocytes 110 (ref 150-350 x 10E g/l), ALAT 90 (ref < 10-45 U/l) Habtoglobin < 0,1 (ref 0,4-2,1 g/l)

Question 1:

What four tests, treatment or examinations of the mother/fetus are recommended?

- ☐ CTG surveillance of the fetus
- ☐ Ultrasound of the fetus with doppler of the umbilical artery
- ☐ Preoperative bloodscreening of the mother
- ☐ Aspirin
- ☐ Low molecular weight heparin
- ☐ Maternal steroid treatment for lung maturation of the fetus

Answer:

CTG surveillance of the fetus
Ultrasound of the fetus with doppler of the umbilical artery
Preoperative bloodscreening of the mother
Maternal steroid treatment for lung maturation of the fetus

Part 5:

You are a general practitioner. A 32-year-old woman in her first pregnancy presents at your office. She is 30 weeks pregnant. She has gained 3 kilos during the last two weeks. Otherwise, she has no complaints. She feels a lot of fetal movement. Her blood pressure is 145/95 mm Hg and there are no traces of proteinuria on her urine dipstick. You measure the symphysis-fundal height to be in the normal range. At the visit 4 days later, her blood pressure is 150 /95, and the urine dipstick has protinuria +2 and she is complaining about epigastric discomfort. Blood samples give you the diagnosis of HELLP syndrome. The patient arrives at the hospital. The blood tests confirm HELLP syndrome: Hgb 12,5 (ref 11-14 g/dl), Thombocytes 110 (ref 150-350 x 10E g/l), ALAT 90 (ref < 10-45 U/l) Habtoglobin < 0,1 (ref 0,4-2,1 g/l).
The ultrasound finds a normal sized baby with normal doppler signals. The CTG is normal.This tells you that the baby is doing well at the moment. Steroids are given to the mother for fetal lung maturation and a preoperative bloodscreening is undertaken. The mother's condition is fine, except for epigastric discomfort.

The next morning, she wakes up with abdominal pain. The uterus is tense and painful. The midwives notice vaginal bleeding. The fetal heart rate is within normal range.

Question 1:

What is the most likely diagnosis?

- Placenta praevia

- Placental abruption
- Appendicitis
- Preterm labour
- Vasa previa

Answer:
Placental abruption

Part 6:

You are a general practitioner. A 32-year-old woman in her first pregnancy presents at your office. She is 30 weeks pregnant. She has gained 3 kilos during the last two weeks. Otherwise, she has no complaints. She feels a lot of fetal movement. Her blood pressure is 145/95 mm Hg and there are no traces of proteinuria on her urine dipstick. You measure the symphysis-fundal height to be in the normal range. At the visit 4 days later, her blood pressure is 150 /95, and the urine dipstick has protinuria +2 and she is complaining about epigastric discomfort. Blood samples give you the diagnosis of HELLP syndrome. The patient arrives at the hospital. The blood tests confirm HELLP syndrome: Hgb 12,5 (ref 11-14 g/dl), Thombocytes 110 (ref 150-350 x 10E g/l), ALAT 90 (ref < 10-45 U/l) Habtoglobin < 0,1 (ref 0,4-2,1 g/l) .The ultrasound finds a normal sized baby with normal doppler signals. The CTG is normal.This tells you that the baby is doing well at the moment. Steroids are given to the mother for fetal lung maturation and a preoperative bloodscreening is undertaken. The mother's condition is fine, except for epigastric discomfort. The next morning, she wakes up with abdominal pain. The uterus is tense and painful. The midwives notice vaginal bleeding. The fetal heart rate is within normal range.
You suspect placental abruption.

Question 1:

What is your treatment option?

- Induce labour with a balloon catheter due to unfavorable cervix status (bishop score 2)
- Induce labour by prostaglandins
- Induce labour by amniotomy and oxytocin
- CTG surveillance and evaluation of the situation in 4 hours
- Prompt delivery by caesarean section

Answer:
Prompt delivery by caesarean section