Eksamensbesvarelse

Eksamen: MED5600_H16_ORD

Oppgave: MED5600_OPPGAVE10_H16_ORD

Spørsmål 1:

In Norway today, prenatal screening for chromosomal abnormalities is offered mainly to pregnant women aged 38 and above. Some argue that such screening should be offered to all pregnant women.
Briefly state three arguments for this view. (maximum. 6 lines)

Svar:

1. Women/couples may want such screening (patient autonomy)
□2. With new technological advances (ultrasound and NIPT) there is no longer any medical reason for the age limit□
3. Many urban/well-off women already today seek out such examinations and an offer for all pregnant women may offset social and geographical inequality
□4. Raising a child with chromosomal abnormalities may be a burden□
5. Savings on social care budgets etc.□
Brief mentions of arguments sometimes used in the public debate suffice for full score.
□2 points per argument max 6 points.

Oppgave: MED5600_OPPGAVE2_H16_ORD

Del 1:

At a routine visit to the health care centre, a 3 year old boy of ethnic Norwegian parents appeared a little pale, his weight and height were at the 10 percentile, and his head circumference at the 25 percentile. The clinical exam was otherwise normal. Previously, the boy has had several seizures in conjunction with high fever and receives anti-epileptic medication with valproate to prevent new seizures. Haemoglobin was 7.8 g/100ml (11.0-15.5), white blood cells (WBC) 7,5 x $10E^9$/L (6-17) with normal distribution of subgroups, and thrombocytes 255 x $10E^9$/L (150-450).

Spørsmål 1:

Which four of the following diagnoses are most likely?

- ☐ Coeliac disease.
- ☐ Haemoglobinopathy.
- ☐ Haemolytic anaemia.
- ☐ Iron deficiency anaemia.
- ☐ Leukaemia.
- ☐ Post-infection anaemia.
- ☐ Rickets.
- ☐ Transitory erythroblastopenia of childhood (TEC).
- ☐ Urinary tract infection.

Svar:

Haemolytic anaemia.
Iron deficiency anaemia.
Post-infection anaemia.
Transitory erythroblastopenia of childhood (TEC).

Del 2:

At a routine visit to the health care centre, a 3 year old boy of ethnic Norwegian parents appeared a little pale, his weight and height were at the 10 percentile, and his head circumference at the 25 percentile. The clinical exam was otherwise normal. Previously, the boy has had several seizures in conjunction with high fever and receives anti-epileptic medication with valproate to prevent new seizures. Haemoglobin was 7.8 g/100ml (11.0-15.5), white blood cells (WBC) 7,5 x $10E^9$/L (6-17) with normal distribution of subgroups, and thrombocytes 255 x $10E^9$/L (150-450).
The most likely diagnoses were iron deficiency anaemia, post-infection anaemia, transitory erythroblastopenia of childhood (TEC) or a haemolytic anaemia. During a more detailed interview the parents told you that the child did not eat very well, but he was very fond of milk. He attended kindergarten and had had several episodes with fever and upper airway infections. His last febrile episode started 14 days ago and he had to be home for one week to fully recover. No antibiotics were given and in addition to valproate, he was medicated with paracetamol when he had high fever. There were no episodes of seizures during this period.

Spørsmål 1:

Which four of the following tests are most appropriate as a *start* of the diagnostic process, in addition to Hb, WBC w/diff.count and platelets (thrombocytes)?

- ☐ Antibodies against gluten and gliadin.
- ☐ Bone marrow examination.
- ☐ Erythrocyte indices (MCV, MCH, MCHC).
- ☐ Global haemostasis tests (ie APTT and INR).
- ☐ Haemoglobin electrophoresis.
- ☐ Haptoglobin, LD and bilirubin.
- ☐ Reticulocyte count.
- ☐ Serum ferritin.
- ☐ Vitamin-D status.

Svar:

Erythrocyte indices (MCV, MCH, MCHC).
Haptoglobin, LD and bilirubin.
Reticulocyte count.
Serum ferritin.

Del 3:

At a routine visit to the health care centre, a 3 year old boy of ethnic Norwegian parents appeared a little pale, his weight and height were at the 10 percentile, and his head circumference at the 25 percentile. The clinical exam was otherwise normal. Previously, the boy has had several seizures in conjunction with high fever and receives anti-epileptic medication with valproate to prevent new seizures. Haemoglobin was 7.8 g/100ml (11.0-15.5), white blood cells (WBC) 7,5 x $10E^9$/L (6-17) with normal distribution of subgroups, and thrombocytes 255 x $10E^9$/L (150-450). The most likely diagnoses were iron deficiency anaemia, post-infection anaemia, transitory erythroblastopenia of childhood (TEC) or a haemolytic anaemia. During a more detailed interview the parents told you that the child did not eat very well, but he was very fond of milk. He attended kindergarten and had had several episodes with fever and upper airway infections. His last febrile episode started 14 days ago and he had to be home for one week to fully recover. No antibiotics were given and in addition to valproate, he was medicated with paracetamol when he had high fever. There were no episodes of seizures during this period.
Erythrocyte indices (MCV, MCH, MCHC), haptoglobin, LD, bilirubin, reticulocyte count and serum ferritin are the most appropriate initial tests. The tests showed: Hb 7.8 g/100 ml (11.0-15,5), WBC 7.5 x10^9/l (6.0-17) granulocytes 55% (40-60) lymphocytes 35% (30-50), platelets 255 x 10^9/l (150-400), reticulocyte count 2 (30-100), The following results were normal: CRP, MCH, MCV, MCHC, ferritin, haptoglobin, LD and bilirubin. Other tests were not performed.

Spørsmål 1:

Based on these results, which two diagnoses are most likely?

- ☐ Coeliac disease.
- ☐ Haemoglobinopathies.
- ☐ Haemolytic anaemia.
- ☐ Iron deficiency anaemia.
- ☐ Leukaemia.
- ☐ Post-infection anaemia.
- ☐ Rickets (in Norwegian - rakitt).
- ☐ Transitory erythroblastopenia of childhood (TEC).
- ☐ Urinary tract infection.

Svar:

Post-infection anaemia.
Transitory erythroblastopenia of childhood (TEC).

Del 4:

At a routine visit to the health care centre, a 3 year old boy of ethnic Norwegian parents appeared a little pale, his weight and height were at the 10 percentile, and his head circumference at the 25 percentile. The clinical exam was otherwise normal. Previously, the boy has had several seizures in conjunction with high fever and receives anti-epileptic medication with valproate to prevent new seizures. Haemoglobin was 7.8 g/100ml (11.0-15.5), white blood cells (WBC) 7,5 x $10E^9$/L (6-17) with normal distribution of subgroups, and thrombocytes 255 x $10E^9$/L (150-450). The most likely diagnoses were iron deficiency anaemia, post-infection anaemia, transitory erythroblastopenia of childhood (TEC) or a haemolytic anaemia. During a more detailed interview the parents told you that the child did not eat very well, but he was very fond of milk. He attended kindergarten and had had several episodes with fever and upper airway infections. His last febrile episode started 14 days ago and he had to be home for one week to fully recover. No antibiotics were given and in addition to valproate, he was medicated with paracetamol when he had high fever. There were no episodes of seizures during this period. Erythrocyte indices (MCV, MCH, MCHC), haptoglobin, LD, bilirubin, reticulocyte count and serum ferritin are the most appropriate initial tests. The tests showed: Hb 7.8 g/100 ml (11.0-15,5), WBC 7.5 x10^9/l (6.0-17) granulocytes 55% (40-60) lymphocytes 35% (30-50), platelets 255 x 10^9/l (150-400), reticulocyte count 2 (30-100), The following results were normal: CRP, MCH, MCV, MCHC, ferritin, haptoglobin, LD and bilirubin. Other tests were not performed.
Post-infection anaemia and transitory erythroblastopenia of childhood (TEC) are the most likely diagnoses. Within short time, he recovered from the post-infection anaemia/transitory erythroblastopenia of childhood (TEC) and his blood values normalized. Eight months later the boy re-visited the health care centre because of repeated episodes of nose bleedings and a rash the parents hadn't previously observed. Otherwise the boy

appeared healthy.

Spørsmål 1:

What is the most important blood test to perform based on this information?

- Hb.
- Thrombocyte count.
- CRP.
- INR/APTT.
- White blood cell count.

Svar:

Thrombocyte count.

Del 5:

At a routine visit to the health care centre, a 3 year old boy of ethnic Norwegian parents appeared a little pale, his weight and height were at the 10 percentile, and his head circumference at the 25 percentile. The clinical exam was otherwise normal. Previously, the boy has had several seizures in conjunction with high fever and receives anti-epileptic medication with valproate to prevent new seizures. Haemoglobin was 7.8 g/100ml (11.0-15.5), white blood cells (WBC) 7,5 x $10E^9$/L (6-17) with normal distribution of subgroups, and thrombocytes 255 x $10E^9$/L (150-450). The most likely diagnoses were iron deficiency anaemia, post-infection anaemia, transitory erythroblastopenia of childhood (TEC) or a haemolytic anaemia. During a more detailed interview the parents told you that the child did not eat very well, but he was very fond of milk. He attended kindergarten and had had several episodes with fever and upper airway infections. His last febrile episode started 14 days ago and he had to be home for one week to fully recover. No antibiotics were given and in addition to valproate, he was medicated with paracetamol when he had high fever. There were no episodes of seizures during this period. Erythrocyte indices (MCV, MCH, MCHC), haptoglobin, LD, bilirubin, reticulocyte count and serum ferritin are the most appropriate initial tests. The tests showed: Hb 7.8 g/100 ml (11.0-15,5), WBC 7.5 x10^9/l (6.0-17) granulocytes 55% (40-60) lymphocytes 35% (30-50), platelets 255 x 10^9/l (150-400), reticulocyte count 2 (30-100), The following results were normal: CRP, MCH, MCV, MCHC, ferritin, haptoglobin, LD and bilirubin. Other tests were not performed. Post-infection anaemia and transitory erythroblastopenia of childhood (TEC) are the most likely diagnoses. Within short time, he recovered from the post-infection anaemia/transitory erythroblastopenia of childhood (TEC) and his blood values normalized. Eight months later the boy re-visited the health care centre because of repeated episodes of nose bleedings and a rash the parents hadn't previously observed. Otherwise the boy appeared healthy.
In healthy appearing children with an increased bleeding tendency it is most important to analyse the thrombocyte count. The boy had thrombocytes 18 x $10E^9$/L (150-450), while the other haematological values were normal. At examination you observed petechial skin bleedings and plenty of bruises.

Spørsmål 1:

Which two are the most likely diagnoses at this visit?

- ☐ Battered child (in Norwegian - barnemishandling).
- ☐ Drug induced thrombocytopenia.
- ☐ Henoch Schönlein purpura.
- ☐ Hemophilia A or B.
- ☐ Immunological thrombocytopenia (ITP).
- ☐ Vitamin K deficiency.
- ☐ Von Willebrand disease.

Svar:

Drug induced thrombocytopenia.
Immunological thrombocytopenia (ITP).

Del 6:

At a routine visit to the health care centre, a 3 year old boy of ethnic Norwegian parents appeared a little pale, his weight and height were at the 10 percentile, and his head circumference at the 25 percentile. The clinical exam was otherwise normal. Previously, the boy has had several seizures in conjunction with high fever and receives anti-epileptic medication with valproate to prevent new seizures. Haemoglobin was 7.8 g/100ml (11.0-15.5), white blood cells (WBC) 7,5 x $10E^9$/L (6-17) with normal distribution of subgroups, and thrombocytes 255 x $10E^9$/L (150-450). The most likely diagnoses were iron deficiency anaemia, post-infection anaemia, transitory erythroblastopenia of childhood (TEC) or a haemolytic anaemia. During a more detailed interview the parents told you that the child did not eat very well, but he was very fond of milk. He attended kindergarten and had had several episodes with fever and upper airway infections. His last febrile episode started 14 days ago and he had to be home for one week to fully recover. No antibiotics were given and in addition to valproate, he was medicated with paracetamol when he had high fever. There were no episodes of seizures during this period. Erythrocyte indices (MCV, MCH, MCHC), haptoglobin, LD, bilirubin, reticulocyte count and serum ferritin are the most appropriate initial tests. The tests showed: Hb 7.8 g/100 ml (11.0-15,5), WBC 7.5 x10^9/l (6.0-17) granulocytes 55% (40-60) lymphocytes 35% (30-50), platelets 255 x 10^9/l (150-400), reticulocyte count 2 (30-100), The following results were normal: CRP, MCH, MCV, MCHC, ferritin, haptoglobin, LD and bilirubin. Other tests were not performed. Post-infection anaemia and transitory erythroblastopenia of childhood (TEC) are the most likely diagnoses. Within short time, he recovered from the post-infection anaemia/transitory erythroblastopenia of childhood (TEC) and his blood values normalized. Eight months later the boy re-visited the health care centre because of repeated episodes of nose bleedings and a rash the parents hadn't previously observed. Otherwise the boy appeared healthy. In healthy appearing children with an increased bleeding tendency it is most important to analyse the thrombocyte count. The boy had thrombocytes 18 x $10E^9$/L (150-450), while the other haematological values were normal. At examination you observed petechial skin bleedings and plenty of bruises. **Isolated thrombocytopenia in a child in good shape is normally associated with ITP and sometimes with drug induced thrombocytopenia. The boy has lately had several nose bleedings, but the parents seem confident about the situation and not worried.**

Spørsmål 1:

What do you recommend next?

- Immediately admit the child to the nearest Paediatric Department.
- Stop all kinds of medication and make a new appointment within a week.
- "Wait and see approach" and ask the parents to contact you if the condition doesn't improve within a month.
- Refer the patient to an Ear, Nose and Throat specialist because of the nose bleedings.

Svar:

Immediately admit the child to the nearest Paediatric Department.

Oppgave: MED5600_OPPGAVE5_H16_ORD

Del 1:

Linn, a 28-year-old woman comes to your office. She has had vaginal bleedings during the last week. She is not sure whether it is her period or not, because the amount of bleeding has varied throughout the week, with large bleedings the last hours. The last year she has had irregular bleedings and she is not sure when she had her last "normal" period. Linn is otherwise healthy. The urine pregnancy test is positive.
Her pulse, blood pressure and S-Hb are normal.
When you perform a speculum vaginal examination you find some blood clots in the vagina but no cervical dilatation. The abdomen is soft but the uterus is slightly enlarged and somewhat tender. No pain or masses are found when palpating the adnexa.
Your gynecologist colleauge performs a vaginal ultrasound examination and find a thickened endometrium, normal ovaries and no sign of intra-abdominal bleeding.

Spørsmål 1:

Which are the three most common diagnoses you have to contemplate?

- ☐ Miscarriage.
- ☐ Molar pregnancy.
- ☐ Myoma uteri (fibroids).
- ☐ Ectopic pregnancy.
- ☐ Early intrauterine pregnancy.
- ☐ Pelvic inflammatory disease.

Svar:

Miscarriage.
Ectopic pregnancy.
Early intrauterine pregnancy.

Del 2:

Linn, a 28-year-old woman comes to your office. She has had vaginal bleedings during the last week. She is not sure whether it is her period or not, because the amount of bleeding has varied throughout the week, with large bleedings the last hours. The last year she has had irregular bleedings and she is not sure when she had her last "normal" period. Linn is otherwise healthy. The urine pregnancy test is positive.
Her pulse, blood pressure and S-Hb are normal. When you perform a speculum vaginal examination you find some blood clots in the vagina but no cervical dilatation. The abdomen is soft but the uterus is slightly enlarged and somewhat tender. No pain or masses are found when palpating the adnexa. Your gynecologist colleague performs a vaginal ultrasound examination and find a thickened endometrium, normal ovaries and no sign of intra-abdominal bleeding.
You are considering whether she has a miscarriage, ectopic pregnancy or early intrauterine pregnancy (with threatening abortion).

Spørsmål 1:

Which blood test do you need to take at this visit to try to further differentiate between miscarriage, ectopic pregnancy, early intrauterine pregnancy at a later follow-up? (one line)

Svar:

s-HCG (6p)

Del 3:

Linn, a 28-year-old woman comes to your office. She has had vaginal bleedings during the last week. She is not sure whether it is her period or not, because the amount of bleeding has varied throughout the week, with large bleedings the last hours. The last year she has had irregular bleedings and she is not sure when she had her last “normal” period. Linn is otherwise healthy. The urine pregnancy test is positive.
Her pulse, blood pressure and S-Hb are normal. When you perform a speculum vaginal examination you find some blood clots in the vagina but no cervical dilatation. The abdomen is soft but the uterus is slightly enlarged and somewhat tender. No pain or masses are found when palpating the adnexa. Your gynecologist colleauge performs a vaginal ultrasound examination and find a thickened endometrium, normal ovaries and no sign of intra-abdominal bleeding. You are considering whether she has a miscarriage, ectopic pregnancy or early intrauterine pregnancy (with threatening abortion).
You would measure serum-hCG. The S-hCG is 1000 U/L. Linn is hemodynamically stable without any pain.

Spørsmål 1:

Which of the suggested follow-up regimens would you choose?

- Abdominal CT (same day) and repeated S-hCG later the same day.
- Repeated S-hCG and gynaecological examination with vaginal ultrasound in 2-3 days.
- Repeated S-hCG and gynaecological examination with vaginal ultrasound in 2-3 weeks.
- No follow up regimen necessary as the S-hCG is low.

Svar:

Repeated S-hCG and gynaecological examination with vaginal ultrasound in 2-3 days.

Del 4:

Linn, a 28-year-old woman comes to your office. She has had vaginal bleedings during the last week. She is not sure whether it is her period or not, because the amount of bleeding has varied throughout the week, with large bleedings the last hours. The last year she has had irregular bleedings and she is not sure when she had her last “normal” period. Linn is otherwise healthy. The urine pregnancy test is positive.
Her pulse, blood pressure and S-Hb are normal. When you perform a speculum vaginal examination you find some blood clots in the vagina but no cervical dilatation. The abdomen is soft but the uterus is slightly enlarged and somewhat tender. No pain or masses are found when palpating the adnexa. Your gynecologist colleauge performs a vaginal ultrasound examination and find a thickened endometrium, normal ovaries and no sign of intra-abdominal bleeding. You are considering whether she has a miscarriage, ectopic pregnancy or early intrauterine pregnancy (with threatening abortion). You would measure serum-hCG. The S-hCG is 1000 U/L. Linn is hemodynamically stable without any pain.
You plan for repeated S-hCG and gynaecological examination with vaginal ultrasound in 2-3 days.
During the following night Linn is admitted to the emergency department with increasing abdominal pain but only scant vaginal bleeding.

Spørsmål 1:

Which is the most likely diagnosis?

- Miscarriage.
- Ectopic pregnancy.
- (Early) intrauterine pregnancy.
- Non invasive hydatiform mole.

Svar:

Ectopic pregnancy.

Del 5:

Linn, a 28-year-old woman comes to your office. She has had vaginal bleedings during the last week. She is not sure whether it is her period or not, because the amount of bleeding has varied throughout the week, with large bleedings the last hours. The last year she has had irregular bleedings and she is not sure when she had her last “normal” period. Linn is otherwise healthy. The urine pregnancy test is positive.
Her pulse, blood pressure and S-Hb are normal. When you perform a speculum vaginal examination you find some blood clots in the vagina but no cervical dilatation. The abdomen is soft but the uterus is slightly enlarged and somewhat tender. No pain or masses are found when palpating the adnexa. Your gynecologist colleauge performs a

vaginal ultrasound examination and find a thickened endometrium, normal ovaries and no sign of intra-abdominal bleeding. You are considering whether she has a miscarriage, ectopic pregnancy or early intrauterine pregnancy (with threatening abortion). You would measure serum-hCG. The S-hCG is 1000 U/L. Linn is hemodynamically stable without any pain. You plan for repeated S-hCG and gynaecological examination with vaginal ultrasound in 2-3 days. During the following night Linn is admitted to the emergency department with increasing abdominal pain but only scant vaginal bleeding.
You consider she most likely has an ectopic pregnancy.

Spørsmål 1:

What treatment and follow-up options would you choose in this situation of suspected extrauterine pregnancy and what are the other options in Linn's case? (Two lines max)

Svar:

The treatment of choice is (laparoscopic) surgery (4p). Alternative treatments are expectant with s-HCG follow-up (2p) or Methotrexate (2p) (Max 6p)