RAEDING TEST 19

PART A

- **TIME: 15 minutes**
- Look at the four texts, A-D, in the separate Text Booklet.
- For each question, 1-20, look through the texts, A-D, to find the relevant information.
- Write your answers on the spaces provided in this Question Paper.
- Answer all the questions within the 15-minute time limit.
- Your answers should be correctly spelt.

Lymphoedema

Text A

Phenotyping childhood lymphoedema

Primary lymphoedema is chronic oedema caused by a developmental abnormality of the lymphatic system and is the most common type seen in the paediatric population. In primary lymphoedema, fluid accumulates due to either abnormal function or structure of the lymphatic system. In most cases, oedema will be present from birth but in some cases, although the lymphatic abnormality is presumed to be present congenitally, the swelling does not develop until some time later. It is thought that the lymphatic system normally functions at about 10% capacity and it is presumed that this functional redundancy allows homeostasis to be maintained for some time in this group of patients. A population prevalence of 1.33 per 1000 for all ages has been reported but it is acknowledge that this is probably an under estimation of the true burden of disease. A specific prevalence figure for primary lymphoedema in the paediatric population has been estimated at 1.15 per 100,000 population, but these numbers are based on those attending a single US clinic. A female preponderance (M:F ± 1:3) is documented, although this may represent ascertainment bias. Primary impairment of the lymphatic drainage system will begin surfacing due to a non-syndromic mendelian condition or as majorly because of other undefined disorder.

Text B

Milroy disease

Milroy disease is congenital onset lymphoedema which, although rarely, transform limbs to the nth degree or portion below the knee to the toe partially but is not reported to affect the arms. Males and females are affected equally. In males, hydroceles are common, affecting up to 30% of those carrying the altered gene. Other characteristic clinical findings include upslanting `ski-jump` toenails and prominent large calibre veins in the legs, most commonly the great (long) saphenous veins. The causative gene was first located on chromosome 5q in 1998 and subsequently numerous causative mutations in the VEGFR3 gene have been described. In those individuals not conforming to the Milroy phenotype, molecular testing of VEGFR3 is not warranted. Inheritance of Milroy disease is autosomal dominant with a penetrance of approximately 85%. This is going to be troublesome for sure as there will be 50% that children might get it from parents who are carrying the genes. De novo mutations have been reported so a family history is not mandatory. For this reason, it is always worthwhile testing the parents of an affected child before calculating recurrence risks.

Text C

Lymphoedema distichiasis

Lymphoedema distichiasis syndrome is a very unusual, not-so-arcane, dominantly inherited condition for which the underlying genetic cause was identified by Fang et al. Almost all individuals with lymphoedema distichiasis syndrome have mutations in FOXC2. This condition is the association of primary, pubertal, or post-pubertal, onset lymphoedema with aberrant eyelashes arising from the Meibomian glands in the eyelids. Other associations include; cleft palate, congenital heart disease, varicose veins and ptosis. Half of affected individuals will have clinically evident varicose veins from an early age, while 100% have venous abnormalities when assessed by ultrasound scanning. A lymphoscintigram showing lymph reflux will necessitate the diagnosis of lymphoedema distichiasis. If distichiasis is not present in the patient or a family member, the chance of finding a

mutation in the causative gene, FOXC2, is extremely unlikely. As distichiasis can be difficult to see, slit lamp examination by an ophthalmologist is advised wherever possible. Due to the increased risk of both cleft palate and congenital heart disease, additional pre-natal scans may be recommended for a fetus at risk of inheriting the condition.

Text D

Case Study

A 29-year-old woman with a history of renal cysts, hypertension and lymphoedema distichiasis syndrome, was referred to ophthalmology, with bilateral blurred vision, hyperaemia and ocular pain, developed over months.

The patient had no positive family history for lymphoedema-distichiasis or other diseases.

Clinical examination revealed stunted height (144â€…cm), neck webbing, bilateral and asymmetric lymphoedema, bilateral distichiasis and keratitis. Other ocular manifestations of lymphoedema-distichiasis, such as ptosis and strabismus, were excluded through ophthalmological examination.

The patient`s symptoms regressed with bilateral electrolysis of the abnormal follicles after unsuccessful attempts at epilation and follicle removal using an argon laser.

Lymphoedema-distichiasis syndrome is a rare condition, associated with diminished quality of life, being linked with chronic keratitis, conjunctivitis and photophobia in 75% of cases.

Distichiasis, which may be present at birth, is observed in 94% of affected individuals.

The FOXC 2 gene is the only gene in which mutations are known to cause lymphoedema distichiasis syndrome. Its protein has a role in a variety of developmental processes, such as formation of veins, lungs, eyes, kidneys, urinary tract, cardiovascular system and lymphatic vessels. Any pathogenic variant of this gene could lead to varicose veins, absence of lymphatic valves, lymphoedema, and cardiovascular and kidney malformations.

The patient did not have a family history for this syndrome. For this reason, lymphoedema-distichiasis syndrome in this case was a probable phenotypic manifestation of a de novo mutation in the FOXC 2 gene.

Questions 1-7

For each question, 1-7, decide which text (A, B, C or D) the information comes from. You may use any letter more than once.

In which text can you find information about;

1. A rare disease condition, peculiarly begins at very early age.
Answer_____.

2 .Diagnosis is based on the presence of primary lymphoedema and distichiasis.
Answer_____.

3. Disorder is passed down (inherited) through families.
Answer_____.

4 .A condition characterized by an excess of watery fluid collecting in the cavities or tissues of the body.
Answer_____.

5. It can be said that approximately 75% of affected individuals have an affected parent.
Answer_____.

6 No proper statistics are available.
Answer_____.

7 Classically affects lower half of the legs only.
Answer_____.

Questions 8-14

Answer each of the questions, 8-14, with a word or short phrase from one of the texts. Each answer may include words, numbers or both.

8. What can occur as a part of more complex syndromic disorder?
Answer_____.

9. What is suggestive of a diagnosis of lymphoedema distichiasis?
Answer_____.

10. Which syndrome is inherited in an autosomal dominant manner?
Answer_____.

11 .What is that Greek Word which may mean “Two Rows?”
Answer_____.

12. What is the percentage of recurrence risk for family members if one of the parents carries the gene?
Answer_____.

13. Which Greek or Latin Word may mean “From The Beginning?
Answer_____.

14. Which syndrome can also present with cardiac abnormalities?
Answer_____.

Questions 15-20

Complete each of the sentences, 15-20, with a word or short phrase from one of the texts. Each answer may include words, numbers or both.

15._____ is possible even with more definitive treatment.

16._____ are known to be affecting many of those with modified gene.

17. In absence of distichiasis, it could be difficult to find_____ in the causative gene.

18. Conservative management of _____ is with lubrication or epilation.

19 ._____ may not surface itself in an apparent way.

20. It is advisable that _____ shall undergo testing as this can minimize risk of transfer of genes

PART B

Questions 1-6

In this part of the test, there are six short extracts relating to the work of health professionals. For questions 1-6, choose the answer (A, B or C), which you think fits best according to the text.

1 As per information given in the table, to define NAFLD;

A Evidence of hepatic steatosis both by histology and imaging is required.

B Secondary causes of hepatic fat accumulation needed to be taken into consideration.

C Monogenic hereditary disorder gets revealed.

NAFLD

In the majority of patients, NAFLD is commonly associated with metabolic comorbidities such as obesity, diabetes mellitus, and dyslipidemia. NAFLD can be categorized histologically into nonalcoholic fatty liver (NAFL) or nonalcoholic steatohepatitis. NAFL is defined as the presence of 5% HS without evidence of hepatocellular injury in the form of hepatocyte ballooning (e.g., ballooning), with or without any fibrosis. A not-so common form of

monogenic disorder but the underlying genetic defect is expressed .

2 The notice is giving more information about;

A Signs and symptoms.

B Problems that might occur due to CMV.

C The contagious nature of the virus.

Infected babies may have health problems that are apparent at birth or may develop later during infancy or childhood. Although not fully understood, it is possible for CMV to cause the death of a baby during pregnancy (pregnancy loss). Some babies may have signs of a congenital CMV infection at birth. These signs include:

- Premature birth,
- Liver, lung and spleen problems,
- Small size at birth,
- Small head size, and
- Seizures.

Babies with congenital CMV infection at birth may have long-term health problems, such as:

Hearing loss, Vision loss,Intellectual disability, Small head size etc.

3 What is right about risks, specific to Laparoscopic Splenectomy?

A Swelling on the stomach.

B May damage lungs completely.

C Blood vessels may rupture.

Risks Involved

Injury to the tail of the pancreas, resulting in a collection of fluid in the abdomen that may require a further operation or drainage procedures.

Bleeding from the blood vessels that flow to the spleen requiring a return to the operating theatre.

Significant distention of the stomach that may lead to a large vomit. Occasionally some of this vomit may be inhaled into the lungs and cause life threatening pneumonia. This is why a tube will be placed via your nose into the stomach for the first day after the operation.

Splenunculi. Many people have tiny `extra` spleens. After the spleen is removed they may grow and patients with blood diseases may have a recurrence of their disease. This may require further surgery.

Because the spleen is very close to the lung, collapse of the left lung, to some measure, is quite common after splenectomy. A physiotherapist will work with you to prevent this. It is very common to have a slight fever on the first 1 ± 2 days after the operation because of this lung collapse.

4 The report stresses more on;

A Shows relatively small for GA

B Mothers who had consultations more than three times outnumbered those who had consultations only twice or thrice.

C Widespread prevalent of the infection.

The majority of the NB had adequate intrauterine growth (67.9%), while 26.9% were small for gestational age (SGA) and 5.2% were large for gestational age. Maternal age varied from 14 to 48 years (mean 25.8±7.3 years). More than 80% of the population of recently delivered mothers were married or had a stable relationship. Two hundred and thirty-seven (94.8%) of the 250 mothers had received some prenatal, with 175 attending four or more consultations and 62 from one to three.

5 The manual gives information about;

A Asystole threshold rate

B Detection rate

C ECG operations

All ventricular fibrillation (VF) and ventricular tachycardia (VT) rhythms at or above this rate will be classified as shockable. All rhythms below this rate will be classified as non-shockable. This rate is programmable between 120 bpm (beats per minute) and 240 bpm via MDLink Software by the Medical Director. The default Detection Rate is 160 bpm

The asystole baseline-to-peak threshold is set at 0.08 mV. ECG rhythms at or below 0.08 mV will be classified as asystole and will not be shockable.

The AED will detect noise artifacts in the ECG. Noise could be introduced by excessive moving of the patient or electronic noise from external sources like cellular and radio telephones. When noise is detected, the AED will issue the prompt “ANALYSIS INTERRUPTED. STOP PATIENT MOTION” to warn the operator. The AED will then proceed to reanalyze the rhythm and continue with the rescue.

6 What does the word sepsis mean?

A Life-threatening complication arising due to infection.

B Indicates release of chemicals into the bloodstream to fight the infection.

C Higher death risk arising due to infection

Pediatric Trauma

The field has made major advances in the areas of sepsis, lung injury, traumatic brain injury and postoperative care. The pediatric intensives role in the Trauma Events is to give steady care during cardiorespiratory or multi-organ failure or recuperation from surgical medications or a traumatic injury that happens to an infant, child or adolescent. It manages the medicinal consideration of infants, children, and teenagers, and as far as possible as a rule ranges from birth up to 18 years old. It is a zone inside a healing center, spends significant time in the consideration of critically ill infants and children. The risk of death for injured children is significantly lower when care is provided in pediatric trauma, which focuses as opposed than non-pediatric trauma which is incorporated into the Critical Care Meetings.

PART C

In this part of the test, there are two texts about different aspects of healthcare. For questions 7-22, choose the answer (A, B, C or D), which you think fits best according to the text.

Text1: Seborrheic Eczema

Seborrheic eczema, also known as seborrheic dermatitis, is a very common skin condition that causes redness often asymmetrically, scaly patches, and dandruff. It most often affects the scalp in an expeditious manner. It may, sometimes, begin to flourish in oily areas of the body, such as the face, upper chest, and back. It is hard to say how it may expand or who may get it - adults, children or newborn babies. When infants develop this condition, it`s known as crib cap; it typically develops within the first few weeks of life and gradually disappears over several weeks or months. The exact cause of seborrheic eczema isn`t known. However, doctors believe there are two main factors that can contribute to the development of the condition. The first factor is an overproduction of oil. An excess amount of oil in the skin might act as an irritant, causing the skin to become red and greasy. The second contributing factor is Malassezia, which is a type of fungus that`s naturally found in the skin`s oils. It can, sometimes, burgeon abnormally, causing the skin to secrete more oil than usual; the increased production of oil can lead to seborrheic eczema.

The condition might also develop in infants due to hormonal changes that occur in the mother during pregnancy. The fluctuating hormone levels are believed to stimulate the infant`s oil glands, leading to an overproduction of oil that may provoke this condition, begin to peeve the skin. Seborrheic eczema is a long-term skin condition that requires ongoing treatment. However, developing a good skin care routine and learning to recognize and eliminate triggers can help you manage the condition effectively. The symptoms of seborrheic eczema are often aggravated

by various factors, including stress, change of seasons, and heavy alcohol use. The types of symptoms that thrive enormously can vary from person-to-person. It`s also possible for symptoms to occur in different parts of the body.

Seborrheic eczema tends to develop in oily areas of the body. It most often affects the scalp, but it can also occur in the following areas: in and around the ears, on the eyebrows, on the nose, on the back, on the upper portion of the chest etc. Seborrheic eczema has a distinct appearance and set of symptoms: skin develops scaly patches that flake off; the patches may be white or yellowish in color (this problem is commonly known as dandruff and it can occur in the scalp, hair, eyebrows, or beard); skin in the affected area tends to be greasy and oily; skin in the affected area may be red; skin in the affected area may be itchy; hair loss may occur in the affected area.

Doctors aren`t exactly sure why some people develop seborrheic eczema while others don`t. However, it does appear that it develops more quickly if a close family member has it. Other factors that contribute to its growth may include: obesity, fatigue, poor skin care, stress, environmental factors, such as pollution, the presence of other skin issues, such as acne etc. The symptoms are similar to those of other skin conditions, including rosacea. To make an accurate diagnosis, a doctor will perform a physical examination and carefully inspect the affected areas. The doctor may also want to perform a biopsy before making a diagnosis. During this procedure, the doctor will scrape off skin cells from the affected area; these samples will then be sent to a laboratory for analysis. The results will help to rule out other conditions that may be causing symptoms.

The doctor will likely recommend the patients to try some home remedies before considering medical treatments. Dandruff shampoos are frequently used to treat seborrheic eczema on the scalp; they usually need to be used every day for optimal results and it is important to follow all instructions on the bottle carefully. Other home treatments that may help manage seborrheic eczema include: using over-the-counter (OTC) antifungal and anti-itch creams; using hypoallergenic soap and detergent; thoroughly rinsing soap and shampoo off the skin and scalp; shaving off a moustache or beard; and wearing loose cotton clothing to avoid skin irritation.

Text 1: Questions 7-14

7 According to paragraph 1, seborrheic eczema is;

A Common among adults

B Common among children

C Common among newborn babies

D Still a mystery to doctors

8 In paragraph 1, which medically-suitable word or phrase would mean growing or developing more in infection?

A Asymmetrical

B Burgeon

C Flourish

D Expand

9 According to paragraph 2, which one of the following statements is true about seborrheic eczema?

A Infants may get this disease from their parents.

B This disease occurs due to secretion of excess of oil by the oil glands, during pregnancy.

C There is no specific treatment available for this disease.

D This disease can spread to various parts of the body as well.

10 According to paragraph 2, which word would mean: â€œto make a bad situation worseâ€•?

A Provoke

B Peeve

C Aggravate

D Thrive

11 Paragraph 3 talks more about â€¦â€¦...

A How the disease affects body parts.

B How the symptoms develop.

C How it can spread to other body areas.

D Affected areas and symptoms.

12 In paragraph 3, â€œflake offâ€ may mean â€¦â€¦.

A to begin to fall

B to come off a surface in small, thin pieces

C to become more obvious

D to begin to develop, usually on the surface

13 The most suitable heading for paragraph 4 is â€¦â€¦â€¦...

A Common symptoms of seborrheic eczema

B Common symptoms and risk factors for eczema

C Who is at risk for seborrheic eczema?

D How is seborrheic eczema examined?

14 The most suitable heading for paragraph 5 is â€¦â€¦â€¦..

A Treatment options for seborrheic eczema

B Cost-effective management of seborrheic eczema

C Common treatment procedures for home-based patients

D How can you treat seborrheic eczema at home?

Text 2: Fibromyalgia

Fibromyalgia is a long-term or chronic disorder. It`s associated with widespread pain in the muscles and bones, areas of tenderness, and general fatigue. Symptoms like these are considered subjective. The lack of reproducible, objective tests for this disorder plays a role in some doctors questioning the disorder altogether. Although it`s more widely accepted in medical circles now than previously, some doctors and researchers don`t consider fibromyalgia a de facto condition. This can increase risk of depression, which stems from a struggle in gaining acceptance for painful symptoms.

Researchers are closer to understanding fibromyalgia, so the stigma that surrounds the condition is disappearing. In the past, many doctors worried that people could use this undetectable pain as an excuse to seek out prescription pain medication. Doctors are now finding that lifestyle changes may be better than medication in treating and managing this condition. The more that doctors begin to accept this diagnosis, the more likely the medical community is to explore effective ways of treating fibromyalgia.

Fibromyalgia is often associated with areas of tenderness, which are called trigger points or tender points. These are places on your body where even light pressure can cause pain. Today, these points are rarely used to diagnose fibromyalgia. Instead, they may be used as one way for doctors to narrow their list of possible diagnoses. The pain caused by these trigger points can also be described as a constant dull ache affecting many areas of your body. If you were to experience this pain for at least three months, doctors may consider this a symptom of fibromyalgia. People with this disorder may also experience: fatigue, trouble

sleeping, sleeping for long periods of time without feeling rested, headaches, depression etc.

A person used to be diagnosed with fibromyalgia if they had widespread pain and tenderness in at least 11 of the known 18 trigger points. Doctors would check to see how many of these points were painful by pressing firmly on them. Trigger points are no longer the focus of diagnosis for fibromyalgia. Instead, doctors may make a diagnosis if you report widespread pain for more than three months and have no diagnosable medical condition that can explain the pain. Medical researchers and doctors don`t know what causes fibromyalgia. However, thanks to decades of research, they`re close to understanding factors that may work together to cause it which include: Infections: Prior illnesses may trigger fibromyalgia or make symptoms of the condition worse. Fibromyalgia often runs in families. If you have a family member with this condition, your risk for developing it is higher. Researchers think certain genetic mutations may play a role in this condition; those genes haven`t yet been identified. People who experience physical or emotional trauma may develop fibromyalgia. The condition has been linked with post-traumatic stress disorder. Like trauma, stress can create long-reaching effects your body deals with for months and years. Stress has been linked to hormonal disturbances that could contribute to fibromyalgia. Doctors also don`t fully understand the factors that cause people to experience the chronic widespread pain associated with the condition. Some theories suggest it may be that the brain lowers the pain threshold. Although the causes are unclear, fibromyalgia flare-ups can be the result of stress, physical trauma, or an unrelated systemic illness like the flu. It`s believed the brain and nervous system may garble or overreact to normal pain signals. This incorrect interpretation could be due to an imbalance in brain chemicals.

Text 2: Questions 15-22

15 In paragraph 1, what does the word â€œsubjectiveâ€• mean?

A Something that requires fact

B Illusory

C Not easy to understand and explain

D Something that can`t be determined or measured by tests

16 According to paragraph 1, what do some doctors feel about fibromyalgia?

A It is a serious condition

B It is a condition that is difficult to examine

C It is a condition that is not real

D It is a condition which every patient finds difficult to accept

17 According to paragraph 2, which one of the following statements is true?

A Doctors of the 21st century know more about this condition.

B Doctors believe change in lifestyle can be more effective in managing the condition.

C Doctors are still finding effective ways of treating this condition.

D Researchers are working on developing new drugs for the treatment of this condition.

18 The most suitable heading for paragraph 3 is â€¦â€¦â€¦

A What are the symptoms of fibromyalgia?

B Trigger points are significant in the diagnosis of fibromyalgia.

C The causal agents of fibromyalgia.

D Common and uncommon symptoms of fibromyalgia.

19 The most suitable heading for paragraph 4 is â€¦â€¦â€¦.

A Role of genetic mutation in fibromyalgia.

B What are trigger points?

C What causes fibromyalgia?

D About trigger points and causal agents of fibromyalgia.

20 According to paragraph 4, which one of the following statements is true?

A Doctors first check trigger points to identify the problem of fibromyalgia.

B Fibromyalgia is a genetic disorder

C Fibromyalgia is hard to detect

D Doctors in the 21st century know more about how fibromyalgia occurs

21 According to paragraph 4, which one of the following statements is true?

A Fibromyalgia is common among people who suffer from emotional trauma.

B Stress is also one of the factors that often leads to fibromyalgia.

C People who suffered long-term illness can develop fibromyalgia.

D none of the above

22 The most suitable heading for paragraph 5 is â€¦â€¦â€¦..

A Genetic Disorder

B Who are at risk of developing fibromyalgia?

C how fibromyalgia is caused?

D common disease-growth indicators