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***Assignment. Pathology***

***Submitted to. Sir waqas ihsan.***

***Question no 1.***

***What is shock. Explain it with types.***

***Answer.***

 ***The term shock may refer to a psychological or a physiological of shock.***

***Physiological shock is caused by traumatic event and is also known as acute stress disorder. This type of shock causes a strong emotional response and May cause physical response as well.***

***Our body experiences shock when you don’t have enough blood circulating through our system to keep organ and tissue functioning properly. It can be caused by any injury or condition that effect the flow of blood through our body. Shock can lead to multiple organ failure as well as life threatening complications.***

 ***There are many types of shock. They fall under four main categories, based on what has effected the flow of the blood.***

* ***Obstructive shock***
* ***Cardiogenic shock***
* ***Distributive shock***
* ***Hypovolemic shock***
1. ***Obstructive shock.***

***Obstructive shock shown when blood can’t get where it needs to go. A pulmonary embolism is one condition that may cause in interruption to blood flow. Condition that can cause a buildup of air or fluid in the chest cavity can also lead to obstructive shock. They include..***

* ***Pneumothorax***
* ***Cardiac tamponade***
1. ***Cardiogenic shock.***

***Damage the heart can decrease the blood flow to our body, leading to the cardiogenic shock. Common causes of the cardiogenic shock include,***

* ***Damage your heart muscle.***
* ***Irregular heart rhythm.***
* ***Very low heart rhythm.***
1. ***Distributive shock.***

***Condition that cause your blood vessels to loss their tone can cause distributive shock. When your blood vessels loss their tone, they can become so open and floppy that not enough blood pressure supply your organ distributive shock can result in symptoms including***

* ***Flushing***
* ***Low blood pressure***
* ***Loss of consciousness***
1. ***Hypovolemic shock.***

***Hypovolemic shock happen when there is not enough blood vessels to carry oxygen to your organ this can be caused by severe blood loss for example, from injuries.***

***Your blood deliver oxygen and vital nutrients to your organ. If you loss lose too much blood, your organ can’t function properly. Dehydration can also cause this type of shock.***

***Question no 2***

***What do you know about granulomatous inflammation, explain it.***

***Answer.***

***Granulomatous inflammation.***

***A form of chronic inflammation that is characterized by collection of activated macrophages, often with T- lymphocytes and some time associated with the central necrosis.Granulomatous inflammation developed when the cell tries to contain and offending agents very difficult to eradicate , then activated macrophages, they will developed plenty of cytoplasm and they will start to resemble to epithelial cell.This type of chronic inflammation is characterized bye the formation of epithelioid cell granuloma.***

***EPITHELIOID CELLS.***

***Activated macrophages with abundant cytoplasmResemble epithelial cellsMay fuse and form multinucleate giants cells.***

***GRANULOMA. The microscopic aggregation of epithelioid cells,gaints cells surrounded by a collar of lymphocytes and plasma cell is call granuloma.***

***Types of the granulomatous inflammation***

* ***Foreign body granuloma***
* ***Immune granulomaFOREIGN BODY GRANULOMAActivated against any foreign body( suture, fiber etc.) in this granuloma absence of cell mediated immune response. In this process the epithelioid cells and giant cells formation that will appose to the surface of foreign body , try to contain the foreign body.***
* ***IMMUNE GRANULOMA.***

***Persistent T – cell mediated immune response, immune granuloma developed in the presence of different microorganism , very difficult to eradicate these microorganism and also cause immune response.***

***Question no 3***

***What is effect tobacco on health?***

***Answer. Smoking leads to disease and disability in harm nearly every organ of the body.***

 ***Smoking cause cancer, heart disease, stroke, lungs disease, diabetes, and chronic obstructive pulmonary disease, which includes emphysema and chronic bronchitis. Smoking also increased risk of tuberculosis, certain eye disease, and problem of the immune system, including rheumatoid arthritis.***

***Second hand smoke exposure contribute to approximately 41,000 deaths among non-smoking adults and 400 deaths in infant in each year.***

***Secondhand smoke cause stroke, lungs cancer, and coronary heart disease in adults. Children who are exposed to second hand smoke are at increased risk for sudden infant death syndrome, acute respiratory infection, middle ear disease, more severe asthma, respiratory symptoms, and slowed lungs growth.***

***Question no 4.***

***What is malignant tumor, diagnose and it treatment.***

***Answer.***

***Malignant tumor. Malignant tumor is a tumor that is invasive, meaning it can invade the surrounding tissue malignant tumor contains cells that are cancerous, growing out of control and capable of metastasizing.***

***Metastasize simply means that the cells of this tumor leave the original tumor and travel to other parts of the body. In cancerous tumor or malignant tumor the cells have lost the ability to stop growing.***

***Diagnose of malignant tumor.***

***The doctor May use one or more approach to diagnose that….***

* ***PHYSICAL EXAM. The doctor May feel areas of the body for lump that may indicate tumor. During physical exam The doctor examine the changes in skin colour, or enlargement of the organ etc. And they check that the cancer is spreadable or not.***
* ***LABORATORY TEST. Laboratory test such as blood and urine test may help the doctor to identify abnormalities that can be caused by cancer.***
* ***IMAGING TEST. Imaging test allow the doctor to examine the bones and internal organ in a non invasive way. Imaging test used in diagnosing cancer may include a CT SCAN, bone scan, MRI, PET SCAN, ultrasound and X-ray among others.***
* ***BIOPSY. During biopsy the doctor collect a sample of the cell for the testing in the laboratory. In the LABORATORY doctor look at the cell under the microscope. Normal cell look uniform, with similar size and orderly organization. Cancer cell look less orderly, with varying sizes and with out apparent organization.***

***Treatment. Doctor have many tools to treat cancer***

* ***SURGERY. The goal of surgery is to remove cancer or as much of the cancer as possible.***
* ***Chemotherapy. Chemotherapy uses drug to kill cancer cells***
* ***RADIATION THERAPY. Radiation therapy uses high powered energy beam such as X-ray to kill cancer cells.***
* ***BONE MARROW TRANSPLANT. A bone marrow transplant allow the doctor to used higher doses of chemotherapy to treat cancer. It may also be used to replace diseased bone marrow.***
* ***IMMUNOTHERAPY. Immunotherapy also known as biological therapy uses to body immune system to fight against cancer.***
* ***HORMONE THERAPY. Some type of cancer are fueled by our body hormones. Eg breast cancer and prostate cancer.***
* ***TARGETED DRUG THERAPY. Targeted drug treatment focus on specific abnormalities with in cancer cells that allows them to survive.***

***Question no 5.***

***Write a detail note on hemorrhage.***

***Answer. ARupture or laceration of blood vessel with extravasation of blood is called haemorrhage. OR Extravasation of blood due to vessel rupture.***

***LOCALIZED CAUSES.***

* ***Trauma***
* ***Abnormality of vessel due to aneurysm***
* ***Atherosclerosis Diapedesis Enlarged interendothelial gap (basement membrane injury)***

***GENERAL CAUSES.***

* ***Defect of coagulation mechanism in disease such as hemophilia ,***
* ***Hypoprothrombinemia , and hyperfibrinogenemia.***
* ***Platelets abnormalities such as purpura and thrombocytopenia.***
* ***Leukemia***
* ***deficiency of Vit. KDifferent terminology related to the hemorrhage.Hematoma: accumulation of blood within tissue.Petechial: Minute 1- to 2-mm hemorrhages into skin, mucous membranes.***

***Purpura. Slightly larger (≥3 mm) hemorrhages.Ecchymosis. Larger (>1 to 2 cm) subcutaneous hematomas (i.e., bruises).Large accumulations of blood in one or another of the body cavities are called hemothorax, hemopericardium, hemoperitoneum, or hemarthrosis (in joints). Hematemesis. Blood during vomitingHemoptysis. Blood with coughMelenaBlood in fecesHematuriaBlood in urine.***

***Clinical feature.***

***Hypovolemic shock due to rapidly and more blood loose Small amount of blood is lethal in brainChronic blood loss may cause iron deficiency anemia.***

***End***