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QNo1: Definition with examples of the following

1)ATROPHY:

Is a decrease in the size of cell or shrinking in the size of cell by loss cell substance.

Examples:1)Pathological:1)Atrophy of skeletal muscles during poliomyelitis

2)Atrophy of brain cortex during atherosclerosis of the blood vessels of the brain

2)HYPERTROPHY:

Is an increase in cell size or tissue due to increase in the size of cell

Example:Pathological:1)cardiac muscles as a result of hypertension

2) skeletal muscles (athletes)

Physiological:1) builds of biceps muscles in arms during exercise

2)Growth of uterus during pregnancy.

3)HYPERPLASIA:

Is an increase in the numbers of cells which results increase the size of an organ

Examples:Pathological:1)growth of adrenal glands due to production of Hormone ATCH

By pituitary adenoma

2)endometrium due to prolonged estrogen stimulus

Physiological:1) increase in the size of breasts during pregnancy

2) liver growth after partial resection

4)METAPLASIA:

Change in the form/shape of cell

Examples:Pathological:Respiratory epithelium in smoker(Ciliated columnar epithelium to squamous

Epithelium)

Physiological:Metaplasia of endocervix(columnar epithelium into squamous epithelium)

Qno2: How does the calcium ions influx affects the cell?

Answers:

Calcium influx to the cytosol comes from extra cellular fluid and stores in Mitochondria, Endoplasmic reticulum.

Calcium activate the phospholipase ,protease and endonucleases

Phospholipase damage the cell membrane,Proteases damage the cytoskeleton and Cell membrane while endo nucleases damage the DNA

So there will be cause a cell injury

Lets suppose they damage the lysosome membrane then enzymes of lysosome come out And start engulf/attack on the cell so cell will be damage and cause a cell injury.

This process occurs in Hypoxia and ischaemia with certain toxins.

QNO3: what is free redical? What is effect of Reactive oxygen specie on cell?

Answers:

Free redical have single unpaired electron in their outermost shell

Other term used for free redical is reactive oxygen specie

Free redical are more reactive .

To get stability they react with everything.

Effects of Reactive oxygen specie on cell.

- 1) Reactive oxygen attacks on nucleic acid membrane and DNA thatswhy Cell become damage and cause cell injury
- 2)when the reactive oxygen specie produce in excess number so they will damage The proteins,carbohydrates, lipids etc so become damage and cause cell injury
- 3)When Reactive oxygen specie reacts with proteins so ROS will damage the Cell and cause a cell injury
- 4)when Reactive oxygen specie reacts with lipids So ROS will the damage lipids So cell become damage and cause a cell injury.

QNO4:Some diffrence between Apoptosis and Necrosis.

Answer:

APOPTOSIS.

1)apoptosisprogrammed Cell death

2)apoptosis could be A pathological and Physiological

3)often beneficial

4) active process.

5)Requies ATP.

NECROSIS

1) necrosis is the Premature cell death

2)necrosis is always pathological process.

3) always harmful to the organisms

4)passive process

5)ATP is depleted.

QNO5: Note on Air embolism

Answers:

Air embolism also known as Gas embolism

An air embolism occurs when one or more air bubbles enter into veins and artery and blocks it and cause a distal ischemic injury

When air bubbles enter into veins its called venous air embolism

When air bubbles enter into artery its arterial air embolism

SYMPTOMS:

Chest pain or heart failure

Muscle or joints pain

Low blood pressure

Stroke

SOURCES:

1)Exogenic:Trauma in the neck or chest

2) Endogenic:caisson diseases or decompression sickness.

THE END.....