Mantle Cell Lymphoma

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LEARNING OBJECTIVES

1. DIFFERENTIATE BETWEEN LEUKEMIAS AND LYMPHOMAS
2. CHARACTERIZE MAIN TYPES OF LYMPHOMAS
3. DIFFERENTIATE BETWEEN HODGKIN AND NON-HODGKIN'S LYMPHOMA
4. CHARACTERIZE DIFFERENT TYPES OF NON-HODGKIN'S LYMPHOMA
5. DESCRIBE MANTLE CELL LYMPHOMA

LYMPHOMA

A LYMPHOMA IS A SOLID, COHESIVE NEOPLASM OF IMMUNE SYSTEM

- TYPICALLY ORIGINATES FROM LYMPHOID TISSUE
- ALWAYS LYMPHOID IN NATURE
- SOME LYMPHOMAS MAY BECOME DIFFUSE, SPILL INTO CIRCULATION AND BECOME LEUKEMIAS

LEUKEMIA

LEUKEMIAS ARE MALIGNANCIES OF HEMATOPOIETIC PROGENITOR CELLS WHICH OFTEN SPILL INTO INTO THE BLOOD STREAM.

- TYPICALLY ORIGINATE IN THE BONE MARROW
- DO NOT FORM COHESIVE MASS
- MAY BE LYMPHOID OR MYELOID
- SOME LEUKEMIC CELLS MAY ENTER LYMPHOID TISSUE, BECOME COHESIVE AND FORM LYMPHOMAS

CLASSIFICATION OF LYMPHOMA

WHO BROADLY CLASSIFY LYMPHOMA AS

- HODGKIN’S LYMPHOMA
- NON HODGKIN’S LYMPHOMA
- LYMPHOCYTIC LEUKEMIAS
- PLASMA CELL DYSPLASIAS

HODGKIN VS NON-HODGKIN LYMPHOMA

- MAIN DIFFERENCE LIES IN HISTOPATHOLOGY WHERE HODGKIN'S LYMPHOMA CONTAIN REED STERNBERG CELLS
- REED STERNBERG CELLS ARE GIANT CELLS WITH TWO NUCLEI CONTAINING PROMINENT NUCLEOLI AND PERIPHERAL CHROMATIN
- HODGKIN'S LYMPHOMA SPREADS IN A CONTINUOUS, CONTIGUOUS MANNER WHILE NON-HODGKIN'S LYMPHOMA SPREADS DISCONTINUOUSLY
- HODGKIN'S LYMPHOMA EXHIBITS NON-SPECIFIC CLINICAL SYMPTOMS LIKE FEVER, CHILLS, WEIGHT LOSS ETC (B FEATURES) WHILE NON-HODGKIN'S LYMPHOMA HAS LESS COMMON CLINICAL FEATURES

TYPES OF NON-HODGKIN LYMPHOMA

1. PRECURSOR B OR T CELL
2. SMALL LYMPHOCYTIC LYMPHOMA/CHRONIC LYMPHOCYTIC LEUKEMIA
3. FOLLICULAR CELL LYMPHOMA
4. MANTLE CELL LYMPHOMA
5. DIFFUSE LARGE B CELL LYMPHOMA
6. BURKITT LYMPHOMA

MANTLE CELL LYMPHOMA

- MANTLE CELL LYMPHOMA ORIGINATES IN THE MANTLE ZONE OF LYMPHOID FOLLICLE.
- IT CONSTITUTES APPROXIMATELY 4% OF ALL NON-HODGKIN'S LYMPHOMAS AND OCCUR MAINLY IN MEN OLDER THAN 50 YEARS OF AGE.
- LYMPH NODES ARE DIFFUSE AND NODULAR, HAVE IRREGULAR NUCLEUS, INCONSPICUOUS NUCLEOLI AND SCANT CYTOPLASM.
- THESE TUMORS ARE MODERATELY AGGRESSIVE AND INCURABLE. THE MEDIAN SURVIVAL ARE 4 TO 6 YEARS

PATHOGENESIS

ALMOST ALL TUMORS HAVE AN (11;14) TRANSLOCATION THAT FUSES THE CYCLIN D1 GENE TO IgH LOCUS. CD1 IS BELIEVED TO BE AN IMPORTANT MEDIATOR OF UNCONTROLLED TUMOR CELL GROWTH.

IMMUNOPHENOTYPE

THE TUMOR CELLS USUALLY COEXPRESS SURFACE IgM AND IgD, CD 10, CD 19, CD 20, CD 5.

CLINICAL FEATURES

- FATIGUE
- LYMPHADENOPATHY
- HEPATOSPLENOMEGALY AND
- BONE MARROW SUPPRESSION IN SEVERE CASES

THANK YOU