

HISTOPATHOLOGICAL TECHNIQUES IN DISEASE DIAGNOSIS

Histopathology is the microscopic study of diseased tissue. It is an important investigative medical tool that is based on the study of human or animal histology (also called microscopic anatomy). It is performed by examining a thin tissue section under light microscopes. Histotechnique consists of a number of procedures that allow visualization of tissue and cell microscopic features and recognize specific microscopic structural changes of diseases.

Procedure for histopathology

1. Tissue fixing in 10% phosphate buffer formalin for 24hours
2. Wash in water
3. Dehydration in 50% ethanol for 1 hour
4. Dehydration in 70% ethanol for 1 hour
5. Dehydration in 90% ethanol for 1 hour
6. Dehydration in 100% ethanol for 1 hour
7. Cleaning in xylene for 2 hours
8. Embedding twice in paraffin at 60°C, each 45 minutes
9. Block making
10. Allow to cool at 4°C for one day
11. Sectioning(5micrometer thickness)
12. Staining of the section
13. Sections
14. Dewaxed in xylene for 10 minutes
15. Absolute ethanol for 10 minutes
16. 90% ethanol for 5 minutes
17. 70% ethanol for 5 minutes
18. 50% ethanol for 5 minutes
19. Wait for 5 minutes
20. Staining in hematoxyline for 7 minutes
21. Wash in running water for 2 minutes
22. Treat in tap water for 5 minutes
23. Wash in tap water for 5 minutes
24. 50% ethanol for 5 minutes
25. 70% ethanol for 5 minutes
26. Stain Eosin (1%) for 2 minutes
27. 90% ethanol for 10 minutes
28. Absolute ethanol for 10 minutes

29. Xylene for 20 minutes
30. Mount in DPX
31. Observe under microscope

OBSERVATION:

Write the importance of histopathology in disease diagnosis.