Paper DLTC 04: Clinical pathology and histopathology

THEORY

Module 1:

- Histo-pathological techniques: Fixatives and fixation; Grossing, dehydration, clearing, impregnation and embedding; Microtome knives and types of microtomes, section cutting, errors in cutting, mounting media, decalcification, automation in tissue processing; Frozen section.
- Staining: Theory of staining, dyes and stains; Mordants, differentiation; Haematoxylin and Eosin staining- principles and procedures;
- Special stains-- P.A.S., Verhoeff's, Massons trichrome, Von Giesson, Fat stains and other stains.

Module 2:

- Examination of urine: Sample collection; Physical examination and Chemical tests-- principles and methods; Reagent strip method
- Microscopic examination- crystals, casts, sediments,
- Stool examination, Pregnancy tests, Semen analysis, Sputum examination.

Module 3:

- Cytological techniques: Exfoliative cytology- fixation, pap staining. Cytological processing of fluids. Fine needle aspiration cytology (FNAC) -- procedure, staining of slides, H & E staining and MGG staining. Automation in cytology.
- Examination of CSF and other body fluids-- pleural, peritoneal, synovial fluid.

PRACTICALS:

1. Grossing and museum techniques.

2. Microtomes knives and their sharpening, section cutting, errors in section cutting and mounting.
3. Decalification, automation in tissue processing.
4. Routine staining techniques-hematoxylin and eosin (H &E) staining.
5. Special staining demonstration- P.A.S., Verhoeff's, Massons trichrome, Von Giesson, fat stains.
6. Examination of urine- Physical and chemical examination, use of Reagent strips.
7. Examination of urine - microscopic
8. Exfoliative cytology-Fixation, Pap staining procedure.
9. Fine needle aspiration cytology (F.N.A.C)- procedure, stains
10. Examination of body fluids- pleural, peritoneal and synovial.
11. C.S.F. examination.
12. Stool examination
13. Sputum examination
14. Pregnancy tests.
15. Semen analysis.

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