STATE MEDICAL FACULTY OF WEST BENGAL

COURSE SYLLABUS: DIALYSIS TECHNICIAN COURSE

First Year

Theory : 60 Teaching Hours:

Anatomy & Physiology

(normal kidney structure and functions) : 4 hours

Derangement of kidney functions

(aetiology, clinical manifestation, diagnosis of acute and chronic renal failure) : 8 hours

Dialysis – the concept

(Brief history, definition, mechanism) : 4 hours

Components of Dialysis

Access, blood flow, anticoagulant, dialsate) : 4 hours

Hemodialysis – Basics

(Blood circuit: tubing, pump, dialyzer, flow rate, dialysate circuit, concentrates,

delivery systems, flow rate) : 12 hours

Anticoagulation

(Heparin, alternatives to Heparin, regional no antigoagulation) : 8 hours

Vascular access

(Temporary, Permanent) : 8 hours

Dialysis water and water treatment : 4 hours

Dialysis and Dialyzer

(including reuse) : 4 hours

Hemodialysis machine : 4 hours

Practical :180 Teaching Hours:

A. Demonstration : (20 x 3 = 60 Teaching Hours)

Demonstration of -

- A Hemodialysis unit
- Demineralisation plant
- Machine
- Intiation of Dialysis
- Conduction of Dialysis
- Dialysis – closure
- Washing, cleaning, reuse
- Maintenance of hygiene in Dialysis unit
- Access – core
- Anticoagulation

B. Actual participation in Dialysis Procedure : 120 Teaching Hours including clinical evaluation of patient

SYLLABUS

Second Year

A. Complications of Hemodialysis : 12 Hours

- Access related complication
- Dialyzer related complication
- Dialysate related complication
- Anticoagulant related complication
- Machine/Blood Pump associated complication
- Special type of complication
- Management of complications
- Maintenance of hygience in Dialysis unit
- Access – core
- Anticoagulation

B. Doses of Hemodialysis : 8 hours

- Duration, index, clearance
- Middle colecules, Ura reduction ration
- Urea kinetic modeling, Dialysis adequacy

C. Continuous Dialysis : 10 hours

- Continuous arteiovenous hemofiltration
- Continuous venovenous hemofiltration
- Continuous hemoduafiltration
- Continuous slow hemodialysis
- Component, access, tubing, filter, replacement, fluid, Antigoagulation, flow rate.

D. Peritoneal Dialysis : 30 hours

- History, Perotioneal physiology, kinetics technique, catheter, dialysate fuuid, insertion procedure, drainage, complication. Continuous peritoneal dialysis procedure, dose.

Practical :160 Teaching Hours:

- Actual conduction of Hemodialysis : 140 hours
- Actual conduction of Peritoneal Dialysis : 20 hours
- Clinical assessment of patients

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