END - STAGE RENAL DISEASE
AND KIDNEY REPLACEMENT THERAPY
IN BACHMAI HOSPITAL
HANOI - VIETNAM

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Overview of Vietnam

Location: South East Asia

Population: 84 millions
  332 000 km²
  60 provinces and 5 cities
  Urban areas: 25%
  Rural areas: 75%

Population growth rate: 2.1% per year

People of working age: 52 millions

In 2005:
  6 doctors and 6.3 nurses
  per 10,000 inhabitants
HEALTH CARE IN VIETNAM

Structure of cause of death

- Elderly (aged 70 and older) 23%
- Accident 11%
- Communicable disease 12%
- Non-communicable disease 47%
- Perinatal death 3%
- Other 4%
Important non-communicable diseases

- Economic growth, aging population, lifestyle changes are causes leading to an increasing burden of non-communicable diseases.

- **Cancer:** Vietnam reports about 75,000 new cases of cancer/year. The case fatality rate is high, and cancer accounts for around 12% of total deaths annually in Vietnam.

- **Vavular heart diseases** decrease, **MI** is now one of leading causes of mortality.
Prevalence of hypertension by age group and sex

- **Hypertension**: prevalence of hypertension in those $\geq 16$ years is 15.1% in males and 13.5% in females. An estimated 50% of men and women $> 65$ years have hypertension.
Accidents and injuries

- **Accidents and injury**: accidents are the 4th leading cause of death in Vietnam (11%) as well as disability.

- **Traffic accidents** is alarming cause. On average, > 40 people died each day

- ⇒ Strong intervention from government: helmet wearing is obligated since 15th, Sept 2007.
Health care in communes
Health care center
In districts
Health care in Hospitals
Bach Mai Hospital Hanoi Vietnam

Establishment: more than 100 years history. The biggest general hospital in Vietnam

Total staff: >2170

Medical doctor: > 350

Nurse: > 900

Professor and Associate Prof: >30

Ph.D degree: >50

Master degree: >70

Number of bed in Nephrology for in-patients: 80

Building which was funded by Japanese government and people (JICA project)
Functional Characteristics of Nephro-urology

Major center for training of Hanoi Medical University
Under-graduate, Graduate level
Training for clinical specialist and CME

Practical place for Nursing School

Scientific study and new technique apply
International collaboration

Advisory for physicians from provinces and cities

Ordinary and Specific Medical Care
(CAPD and HD)
Therapies for Out-patients and In-patients

Take part in upgrading level and quality of medical system in Nephrology of Vietnam
Nephro-Urology Department

Administration
- Head of Department
- Deputy Head Dep.
- Head Nurse

Staff
15 doctors:
- 1 A/Prof
- 2 MD. PhD.
- 11 MD. MS
- 1 second degree Specialist
- 24 nurses

Nurses
Disease:
- GN
- Diabetic GN
- Urinary infection
- Kidney stone
- Polycystic
- Cancer
- Congenital abnormalities
- Tubulopathies
- Kidney failure all causes
- Prostatic disease

Technics
- UltraSound (Echo)
- Cystoscopy and cystography
- IVP
- UPR
- Kidney Biopsy
- CAPD
- HD for emergency
- Ultrafiltration
- Plasma apheresis
- Lithotripsy

Main activities
- Patient care
- Training
- Research
- Direction and advising for Local hospitals
CLINICAL ACTIVITIES

Department has experienced in treatment and education for 30 years with:

1. The nephrology out-patient service:
   Approx: 18000 patients visit/year.

2. Inpatient activity: 80 inpatient beds, over 3563 patients/year

3. Before 9/2007: we had 12-25 cases acute HD daily

4. From 9/2007: Received dialysis machines from NPO Japan many of life are timely saved.
CLINICAL ACTIVITIES

1. Patients admissions:
   - Acute renal failure,
   - Chronic renal failure with or without complications
   - Nephrotic syndrome with or without complications
   - Obstructive uropathy or urinary tract infection.
1. The follow up:

- Consultation units for chronic renal failure patients
- New patient who are referred to the nephrology department for (CAPD) or kidney transplantation.
- Urologic problems
CKD IN VIETNAM

• 2002 in central vietnam: 3.38 % CKD at various stage:
  • Stage I: 0.28%,
  • Stage II: 0.39%
  • Stage III: 0.16%
  • Stage IV, V: 0.09%
• Age: 51.7 ± 16.5 years
ESRD IN VIETNAM

2005: Hanoi screening: Identified 3.1% of subjects as CKD (stages 3-5) with positive findings in urine test

2008:
• Estimated 100-150 new patients/ million/ year
• Total new patients/ years : 1000
• ESRD patients on hemodialysis : 10000
PERCENTAGE OF ESRD PATIENTS IN DEPARTMENT OF NEPHROLOGY

- ESRD: 55%
- Other diseases: 45%
Sex distribution of ESRD patients

65% Female

35% Male
ESRD treatment Methods

ESRD

EVALUATION

1-3% CAPD

ACUTE HD (90%)

AVF

HD CENTER

KIDNEY TRANSPLANTATION

SMALL NUMBERS

90% ESRD patients come at very late with complications
CAUSES OF RENAL DISEASES ON HD

- Diabetic Nephropathy: 9%
- Polycystic kidney disease: 8%
- SLE: 3%
- Chronic GN: 3%
- Hypertension: 2%
- Kidney Stone: 1%
- Other: 1%

74%
ESRD AND TREATMENT METHODS

- Hemodialysis
- CAPD
- Kidney transplantation

HD: 87%
CAPD: 4.3%
KT: 8.7%
Internal jugular central line or femoral line for acute hemodialysis
Internal jugular central line for acute dialysis
HD THERAPY

- Total number in Vietnam: Approx: 10000
- Not all provinces have dialysis center
- Mostly located in cities and big hospital:
  - Hanoi: 300, Hochiminh City: 600 patients
- Payment: Insurance cover for insurance card holders
- Dialyzer: Reused and most low flux
- Cost: 20 USD/4 hours
HD THERAPY in hospital

1. Acute dialysis unit
   - 25-30 patients /day
   - Internal jugular central I or femoral line
   - waiting for AVF maturation

2. Chronic dialysis unit
   - Patients : 600
   - Total HD machines: 80
   - 4 shifts per day
   - Patients with longest duration on HD : 20 years
Acute HD unit
Chronic DIALYSIS unit
CAPD TREATMENT

- Started in Vietnam since 2000
- Total number in Vietnam: Approx: 1100
- Not all provinces have CAPD center
- Country total: 22 center for CAPD
- Mostly located in cities and big hospital:
  - Hanoi: 300, Hochiminh City: 600 patients
- Come to see doctor: Monthly

- Patients choices:
  1. On working
  2. Far from hemodialysis center.
CAPD IN DEPARTMENT OF NEPHROLOGY
The number of patients on years

N = 345
AGE OF CAPD PATIENT
n = 345

Oldest : 81                        youngest: 15
CAPD TREATMENT
CAPD TREATMENT IN OUR HOSPITAL

• CAPD started 2004
• Total numbers CAPD : 345
• Present: 230
• Mortality after 6 years: 74 (21,4%)
• Turn to HD and Kidney Transplantation: 41 (11,9%)
• Cost: 400 USD/ month
• Payments: Insurance company for health insurance card holders
Avenues for improvements in our country include:

1. Increasing awareness of renal disease amongst the population and general practitioners
2. Early diagnosis of CKD, making preventive strategies to delay the onset of ESRD
3. Greater government involvement to better fund units, enhance the quality of services and the wider availability of transplantation.