Basic Sciences of Osteology and Osteoporosis

Lecture 1

Learning Objectives

1. Physiologic role of bones

2. Osteocytic modulation of bone metabolism and mineralization

3. Bone as an endocrine organ

4. Pathogenesis of osteoporosis

5. Treatment rationale

Epidemiology : Trend And Risk Factors of Osteoporosis And Fractures

Lecture 2

Learning Objectives

1. Silver Aging Tsunami

2. Update Fracture Facts in Taiwan

3. Co-morbidity And Osteoporotic Fracture

4. Key Messages

How to Indentify Patients with

Osteoporosis&Fracture Clinically

Lecture 3

Learning Objectives

1. Recognize the clinical risk factors of osteoporosis/fractures

2. Describe relevant history / physical examination

3. Describe clinical blood tests

4. Describe radiographical examination

5. Describe clinical screening assessment

DXA Measurement of BMD

Lecture 4

Learning objectives

1. Basic Principles of DXA

2. Patient positioning and scan analysis

3. Principles for interpreting and reporting DXA scans

Pitfalls in DXA and TBS , QUS , etc

Osteoporosis Management : Guidelines Vitamin D and Calcium

Lecture 5

Learning Objectives

- Part I

1. Major international and national osteoporosis guidelines

2. Algorisms in osteoporosis evaluation and management

- Taiwan , NOF , NOGG

- Glucocorticoid induced osteoporosis

- Part II

1. Bone structure

2. Recommended daily dose of Ca. and Vit. D

3. Source and Ca. and Vit D , optimal level

4. Effects vitamin D/calcium on bone

Bisphosphonates and Denosumab

Lecture 6

Learning Objectives

1. State the pharmacological properties of bisphosphonates

2. Reveal the effects of bisphosphonates

3. Practical use the bisphosphonates in clinical practice

4. State the pharmacological properties of denosumab

5. Reveal the effects of denosumab

6. Practical use the denosumab on clinical practice

7. Review the adverse effect, issue of drug holiday and discontinuation

8. Treatment guideline and reimbursement of bisphosphonates and denosumab

SERMs, STEARS9(tibolone) and Estrogen

Lecture 7

Learning Objectives

1. Mechanism of Hormone Therapy on Osteoporosis

2. Hormone Replacement Therapy for Osteoporosis

3. Selective Tissue Estrogenic Activity

   Regulator(STEAR) for Osteoporosis

4. Selective Estrogen Receptor Modulators(SERM)

   for Osteoporosis

Anabolic agents, sequential and combination therapy

and treatment failure

Lecture 8

Learning Objectives

1. Anabolic agents

● Teriparatide

● Abalopeptide

● Anti-sclerostin antibody

2. Sequential and Combination therapy