

Case study

Gãy đầu dưới xương quay và điều trị lỏng xương

Hồ Quang Hưng

13/6/2013

- T.T.T., 1943
- 19/12/2012 mổ KHX (BS Thi), nẹp vải
- 4/2/13 (1.5 tháng): rút 2 đinh xương trụ
- Khám vào khoa (20/2/2013 - 2 tháng):
 - Tê mặt mu bàn tay phía ngón 4-5
 - Nắm chưa hoàn toàn
 - Sẹo mổ phía quay, trụ xơ dính
 - Cổ tay sấp – ngửa (45-0-45)
 - Di động ổ gãy (+), đau
 - Xq: di lệch thứ phát sau rút kim Kirschner
 - Tập VLTL tại khoa (Cô Dung)
 - Dùng alendronate (FOSAMAX) từ 3 tháng.
- Tái khám (15/4/2013 – 4 tháng):
 - Sấp – ngửa (45-0-70)
 - Nghiên quay – trụ (0-0-30)
 - Ổ gãy không di động, nhưng có đau
 - Xq: không di lệch thêm, chậm lành xương
 - Kết thúc điều trị VLTL tại khoa



- Tái khám (10/6/2013 – 6 tháng)

- Còn tê ngón 4-5
- Đau nhẹ vùng cổ tay
- Gấp 40, duỗi 60
- Sấp 60, ngửa 70
- Lực nắm: (P)16kg / (T)14kg (tay trái bị trigger finger)
- Đi chợ mang giỏ 2 kg
- Xq: can xương rõ
- Tư vấn: chịu sức nặng ổ gãy nhiều hơn



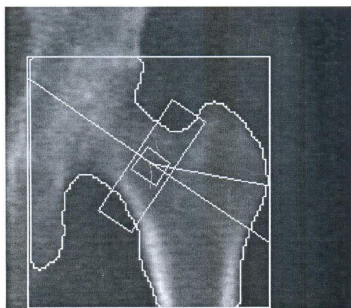
CHO RAY HOSPITAL
201B, Nguyen Chi Thanh, Q.5
Ho Chi Minh, Viet Nam

Name: [REDACTED]
Patient ID: 45041CR
DOB: 01 January 1943

Sex: Female
Ethnicity: Asian

Height: 162.0 cm
Weight: 57.0 kg
Age: 70

Referring Physician: TRINH



89 x 92
NECK: 49 x 15
HAL: 96 mm

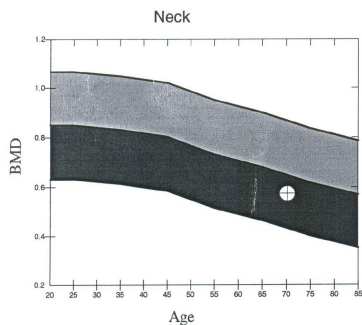
Scan Information:

Scan Date: 27 March 2013 ID: A0327130X
Scan Type: f Left Hip
Analysis: 27 March 2013 13:35 Version 12.7.3.1
Hip
Operator:
Model: QDR 4500W (S/N 50236)
Comment:

DXA Results Summary:

Region	Area (cm ²)	BMC (g)	BMD (g/cm ²)	T - score	PR (%)	Z - score	AM (%)
Neck	5.19	2.98	0.574	-2.5	68	-0.7	88
Troch	6.93	4.13	0.596	-1.1	85	0.3	105
Inter	16.31	13.79	0.846	-1.6	77	-0.4	94
Total	28.44	20.90	0.735	-1.7	78	-0.2	97
Ward's	1.13	0.44	0.389	-3.0	53	-0.4	89

Total BMD CV 1.0%
WHO Classification: Osteoporosis
Fracture Risk: High



Physician's Comment:
LOANG XUONG

T-score vs. White Female; Z-score vs. White Female. Source: BMDCS/NHANES

HOLOGIC®

Đo mật độ xương cổ
xương đùi khác vùng
háng toàn phần

Fracture risk

Calculation Tool

Please answer the questions below to calculate the ten year probability of fracture with BMD.

Country: Name/ID: [About the risk facto](#)

Questionnaire:

1. Age (between 40 and 90 years) or Date of Birth
 Age: Date of Birth: Y: M: D:

2. Sex Male Female

3. Weight (kg)

4. Height (cm)

5. Previous Fracture No Yes

6. Parent Fractured Hip No Yes

7. Current Smoking No Yes

8. Glucocorticoids No Yes

9. Rheumatoid arthritis No Yes

10. Secondary osteoporosis No Yes

11. Alcohol 3 or more units/day No Yes

12. Femoral neck BMD (g/cm²)
 T-score: -2.4

BMI: 21.7
 The ten year probability of fracture (%)
with BMD

Major osteoporotic	11
Hip Fracture	2.6

FRACTURE RISK CALCULATOR

5 & 10 year Fracture Risk For Tang Thi Tu

Prepared 30-May-13

Hip Fracture

2.6%

5 year risk

5.2%

10 year risk

Any Osteoporotic / Fragility Fracture

10%

5 year risk

20.2%

10 year risk

The following values are equivalent to those at which current Pharmaceutical Benefits Scheme reimbursements for osteoporosis therapy apply.

Hip Fracture

2-5%

5 year risk

3-9%

10 year risk

Any Osteoporotic / Fragility Fracture

8-13%

5 year risk

14-26%

10 year risk

Sex

Female

Age

70

Fractures since age of 50

Nil

Falls over last 12 months

Nil

T-Score

-2.5

Actual BMD (DXA Hologic)

0.574 g/cm²

Disclaimer

The results produced by our calculator should serve as a guide only. If concerned about your fracture risk, it is also important to consult your doctor or a bone specialist.

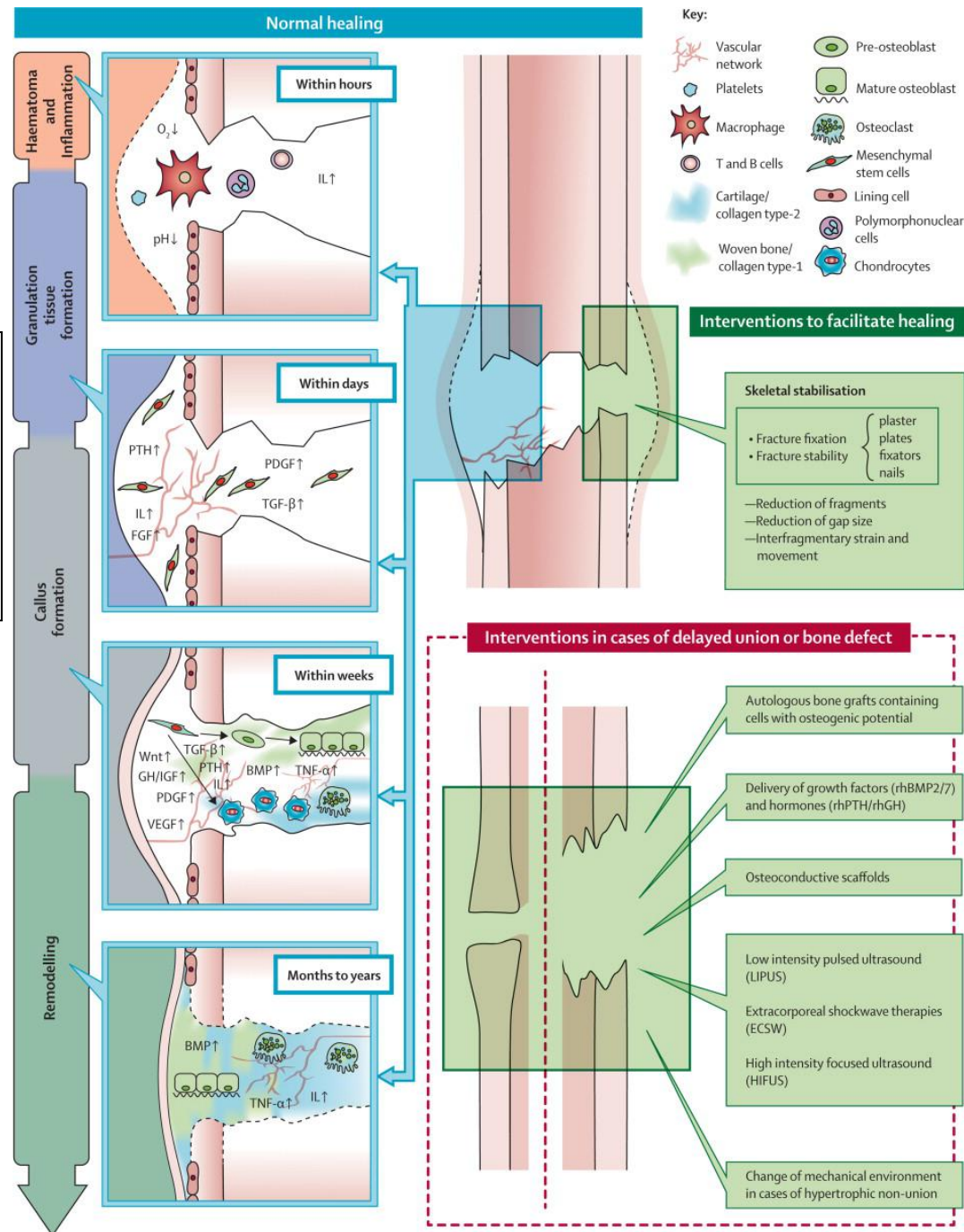
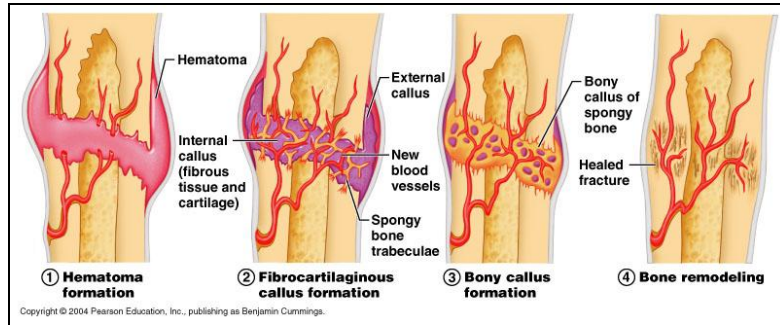
Please note current Pharmaceutical Benefits Scheme reimbursements for osteoporosis therapy depend upon clinical factors that translate to risk of hip and osteoporotic / fragility fracture as shown.

© Garvan Institute 2008

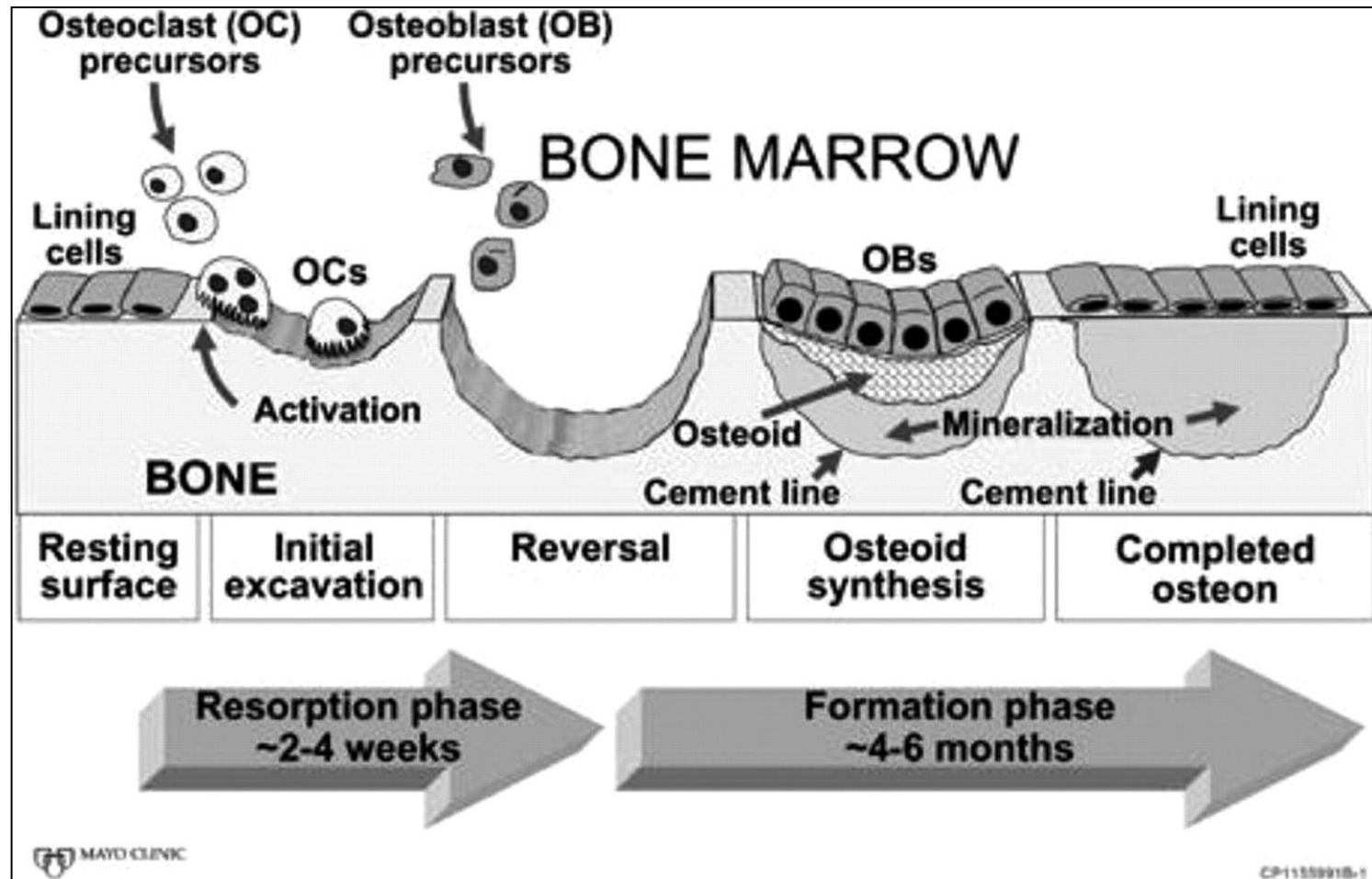
FRAX-Previous fracture (+): 18%/4.0%

TUAN-Fracture since age of 50 (+):
 [5.8%/11.4%]-[16.9%/32.8%]

Bone healing



Cơ chế tác dụng của alendronate: ức chế osteoclast



Câu hỏi: loãng xương có làm chậm lành xương không?

- Chưa rõ mối liên quan giữa loãng xương và lành xương
- Nhưng loãng xương làm tăng nguy cơ kết hợp xương thất bại

➔ Điều trị loãng xương tích cực từ sớm (BS Tuấn – phó khoa CTCH BV Chợ Rẫy – 12/6/2013)

Câu hỏi: việc dùng bisphosphonate có ảnh hưởng lên sự lành xương không?

DELAY IN HEALING	<p>Li C et al. Long-term effect of incadronate disodium (YM-175) on fracture healing of femoral shaft in growing rats. J Bone Miner Res. 2001 Mar;16(3):429-36.</p> <p>Cao Y et al. Raloxifene, estrogen, and alendronate affect the processes of fracture repair differently in ovariectomized rats. J bone Miner Res. 2002 Dec;17(12):2237-46.</p> <p>Rozental TD et al. Comparison Of radiographic fracture healing in the distal radius for patients on and off bisphosphonate therapy. J Hand Surg Am. 2009 Apr; 34(4):595-602.</p>
NO EFFECT	<p>Peter CP, et al. Effect of alendronate on fracture healing and bone remodeling in dogs. J Orthop Res. 1996 Jan;14(1):74-9.</p> <p>Madsen JE et al. No adverse effects of clodronate on fracture healing in rats. Acta Orthop Scand. 1998 Oct; 69(5):532-6.</p> <p>Munns CF et al. Delayed osteotomy but not Fracture healing in pediatric osteogenesis imperfecta patients receiving pamidronate. J Bone Miner Res .2004 Nov;19(11): 1779-86.</p>
ACCELERATED HEALING	<p>Goodship A et al. Use of bisphosphonate (pamidronate) to modulate fracture repair in ovine bone. Ann Oncol. 1994; 5 Suppl 7:S53-5.</p> <p>Little D et al. Manipulation of the anabolic and catabolic responses with OP-1 and zoledronic acid in a rat critical defect model. J Bone Miner Res. 2005 Nov;20(11):2044-52.</p> <p>Amanat N et al. A single systemic dose of pamidronate improves bone mineral content and accelerates restoration of strength in a rat model of fracture repair. J Orthop Res. 2005 Sep;23(5):1029-34.</p> <p>Amanat N et al. Optimal timing of a single dose of zoledronic acid to increase strength in rat fracture repair. J Bone Miner Res. 2007 Jun;22(6):867-76.</p> <p>Nagahama K et al. Does alendronate disturb the healing process of posterior lumbar interbody fusion? A prospective randomized trial. J Neurosurg Spine. 2011 Apr;14(4):500-7.</p>

Early Initiation of Bisphosphonate Does Not Affect Healing and Outcomes of Volar Plate Fixation of Osteoporotic Distal Radial Fractures

Hyun Sik Gong, MD, PhD, Cheol Ho Song, MD, Young Ho Lee, MD, Seung Hwan Rhee, MD,
Hyuk Jin Lee, MD, and Goo Hyun Baek, MD

Investigation performed at the Department of Orthopedic Surgery, Seoul National University Bundang Hospital, Seongnam, South Korea

Background: Bisphosphonates can adversely affect fracture-healing because they inhibit osteoclastic bone resorption. It is unclear whether bisphosphonates can be initiated safely for patients who have sustained an acute distal radial fracture. The purpose of this randomized study was to determine whether the early use of bisphosphonate affects healing and outcomes of osteoporotic distal radial fractures treated with volar locking plate fixation.

Methods: Fifty women older than fifty years of age who had undergone volar locking plate fixation of a distal radial fracture and had been diagnosed with osteoporosis were randomized to Group I (n = 24, initiation of bisphosphonate treatment at two weeks after the operation) or Group II (n = 26, initiation of bisphosphonate treatment at three months). Patients were assessed for radiographic union and other radiographic parameters (radial inclination, radial length, and volar tilt) at two, six, ten, sixteen, and twenty-four weeks, and for clinical outcomes that included Disabilities of the Arm, Shoulder and Hand (DASH) scores, wrist motion, and grip strength at twenty-four weeks. The two groups were compared with regard to the time to radiographic union, the radiographic parameters, and the clinical outcomes.

Results: No significant differences were observed between the two groups with respect to radiographic or clinical outcomes after volar locking plate fixation. All patients obtained fracture union, and the mean times to radiographic union in Groups I and II were similar (6.7 and 6.8 weeks, respectively; $p = 0.65$). Furthermore, the time to radiographic union was not related to osteoporosis severity or fracture type.

Conclusions: In patients with an osteoporotic distal radial fracture treated with volar locking plate fixation, the early initiation of bisphosphonate treatment did not affect fracture-healing or clinical outcomes.

Level of Evidence: Therapeutic Level I. See Instructions for Authors for a complete description of levels of evidence.

Tóm tắt

