

« PHARMACIST AND OSTEOPOROSIS » A TRAINING PROGRAM FOR FRENCH PHARMACISTS

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CONTEXT AND OBJECTIVES

Each year, 50 000 men and women in France have a hip fracture due to osteoporosis. 20% of them die during the following year and 50% keep a major handicap. The complications of this pathology have an important cost for the public health care system. Osteoporosis is a real health problem, which is increasing with the ageing of the French population.

A national training program for French community pharmacists has been designed to involve them in the prevention and detection of osteoporosis as well as in the pharmaceutical care of osteoporotic patients.

TRAINING PROGRAM

Partners

4 societies :

- Sanitary and Social Education Committee for French Pharmacy (CESPHARM)
- Continuing Education Association for French Pharmacists (UTIP)
- International Osteoporosis Foundation (IOF)
- Research and Information Group on Osteoporosis (GRIO)

→ *Conception, expert evaluation, coordination, implementation, logistic*

7 pharmaceutical companies involved in osteoporosis care :

Aventis and Procter & Gamble, HRA-Pharma, Lilly, Merck Sharp & Dohme-Chibret, Pierre Fabre, Roche, and the French Representative Institution for Drug Companies (LEEM).

→ *Sponsoring*

Content

The training program focused on each level of the pharmacist intervention :

- information of public on osteoporosis
- contribution to the osteoporosis early detection
- patient education
- prevention of falls and fractures

ASSESSMENT

2 841 pharmacists from 26 areas of France were trained between November 2002 and November 2003 (Fig. 1)

Satisfaction

Participants' satisfaction was evaluated by a questionnaire filled in after each session.

A great satisfaction of pharmacists was noted, with a mean mark of 6.4 out of 7.

Knowledge evaluation

Acquired knowledge was evaluated by filling out the same questionnaire (an anonymous multiple choice question paper) before and after each session (1955 paired questionnaires). The questions concerned : osteoporosis characteristics, risk factors, warning signs, prevention measures and treatments.



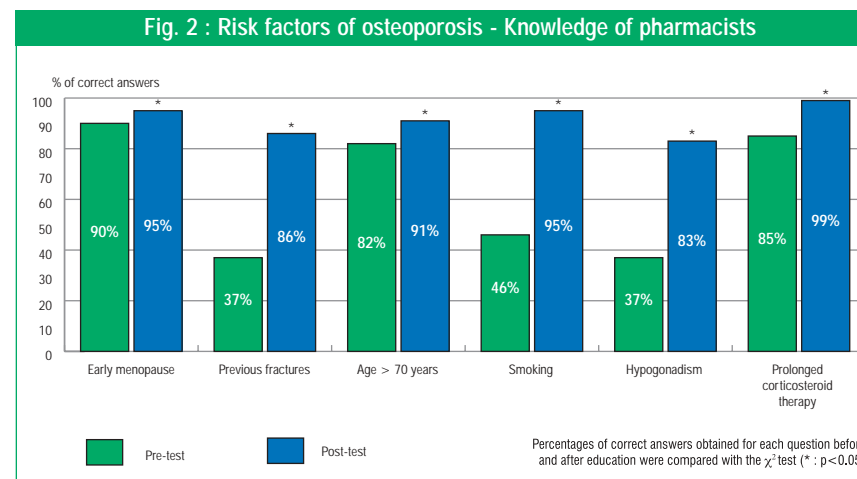
General knowledge on osteoporosis

Respectively 86% and 78% of pharmacists after education knew the physiopathology and the epidemiology of osteoporosis, against 73% and 64% before education.

Risk factors (Fig. 2)

The evaluation focused on 6 risk factors. A marked improvement of pharmacists' knowledge was observed in these fields after the training session :

- Early menopause (age < 45 years) : 95% (post-test) against 90% (pre-test) of correct answers
- Previous fractures : 86% (post-test) against 37% (pre-test) of correct answers
- Elderly people (> 70 years) : 91% (post-test) against 82% (pre-test) of correct answers
- Smoking habits : 95% (post-test) against 46% (pre-test) of correct answers
- Hypogonadism : 83% (post-test) against 37% (pre-test) of correct answers
- Prolonged corticosteroid therapy (prednisone, or equivalent, > 7.5 mg daily with a use of 3 months or more) : 99% (post-test) against 85% (pre-test) of correct answers.



Warning signs

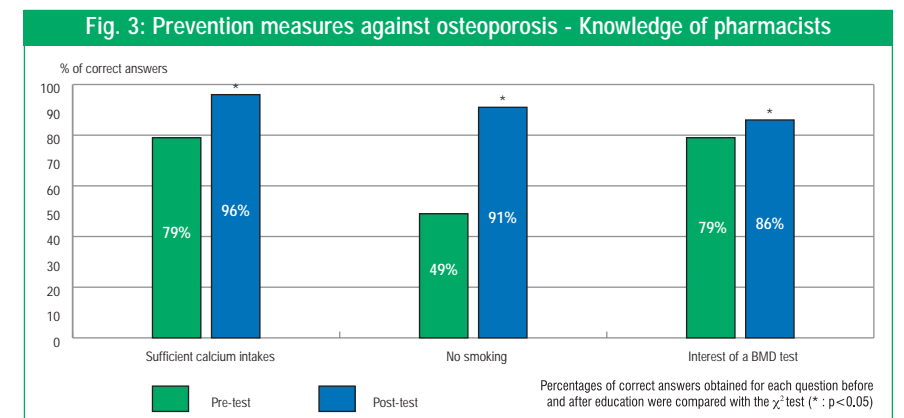
The evaluation shows an improvement of the pharmacists' knowledge concerning the warning signs of osteoporosis :

- Loss of height > 3cm : 98% (post-test) against 85% (pre-test) of correct answers (χ^2 test : p<0.05)
- Wrist fracture after a tiny shock : 99% (post-test) against 91% (pre-test) of correct answers (χ^2 test : p<0.05)
- Thoracic kyphosis : 94% (post-test) against 27% (pre-test) of correct answers (χ^2 test : p<0.05)
- Vertebral fracture after a simple sneeze : 82% (post-test) against 78% (pre-test) of correct answers (χ^2 test : p<0.05)

Only one item concerning warning signs had a worse score after than before formation :
Rachis pain in a menopausal woman : 43% (post-test) against 51% (pre-test) of correct answers

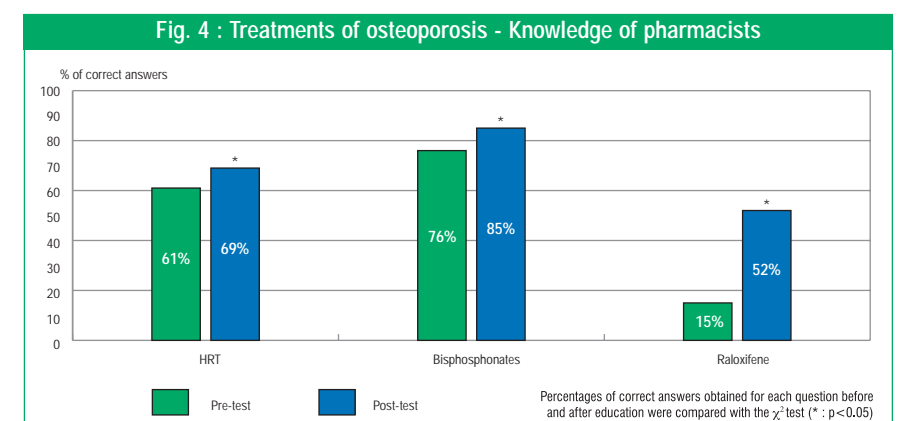
Prevention measures (Fig. 3)

- 96% of pharmacists after education knew the beneficial effect on bone health of dietary calcium intakes adapted to the age, against 79% before the training session.
- 49% and 91% of participants respectively before and after education knew that not to smoke is better for bone health.
- After education, 86% of pharmacists knew the interest of a bone mineral density (BMD) test in osteoporosis prevention, against 79% before the training session.



Treatments (Fig. 4)

- 61% and 69% of participants respectively before and after education gave correct answers to all propositions concerning Hormone Replacement Therapy (HRT).
- After education, 85% of pharmacists gave correct answers to all propositions concerning bisphosphonates, against 76% before education.
- 52% of pharmacists after education knew the raloxifene (Selective estrogen receptor modulator). They were 15% before the training session.



CONCLUSION

This training program was elaborated within the framework of a partnership between institutional organisations and pharmaceutical companies all involved in osteoporosis care. The evaluation data highlight the great satisfaction of pharmacists and the immediate and important benefits of this program on their required knowledge. Such a training program should contribute to a major involvement of pharmacists in the prevention and detection of osteoporosis.