Can we improve the compliance to prevention treatment after a wrist fracture?

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Distal radius fracture in women after menopause is in many cases a first clinical indication for the presence of Osteoporosis. Women and community physicians are generally unaware of the implications of the fracture, the significance of post fracture diagnosis of osteoporosis and, if needed, the commencement of medical treatment in order to prevent the recurrence of the same, or different fractures. As result of this kind of unawareness (and other factors) it is estimated that only 15-25% of women after menopause with a distal radius fracture are further referred to preform a diagnostic examination. The purpose of the current research was double: A. to find out the percentage of patients who have suffered a distal radius fracture and are referred to further osteoporosis workup, and B. to examine whether intervention on the part of the hospital, which includes contacting these patients a number of weeks after they have suffered the fracture, giving them an explanation over the phone as well as sending written information regarding the subject both to the patient and to the family physician, will increase the percentage of patients that undergo diagnostic workup after suffering a fracture in the distal radius.

**Methods**- The research is prospective, with a component of survey on the current situation, an interventional component to improve responsiveness and an additional survey for assessment of the intervention's effect. The research
included women after menopause between the ages of 48-70 who have not suffered from osteoporosis fractures or diagnosed as osteoporotic and are not demented or of need of a guardian. The control group included 49 patients 6-8 weeks after suffering a fracture of the distal radius who were asked by phone whether they received a primary explanation from the hospital or from the family physician about the relation between the fracture they suffered from and osteoporosis, and whether they were referred to a diagnostic examination as consequence. The intervention group included 50 patients 6-8 weeks after suffering a fracture of the distal radius, who, aside of the primary clarification conversation, were given a detailed explanation regarding the possible relation between the fracture and osteoporosis, and in addition, were sent a letter attached to an explanatory pamphlet and an appeal to the family physician with a recommendation for additional diagnostic workup well as an article emphasizing this subject.

A positive influence of the intervention included a reference of the patient to the family physician and performing of a diagnostic examination. This influence was tested by an additional telephone survey conducted 6-8 weeks after the first conversation.

**Results** - In the intervention group 15 patients were excluded for lack of ability to make contact or a preliminary diagnosis of osteoporosis comparing to 14 patients in the control group, in addition there was no significant difference between the groups in terms of age or descent.
At the end of the research 24 patients (72.7%) from the intervention group referred to their family physician after receiving the explanation and the explanatory pamphlet [compared to 8 patients (22.9%) in the control group], 14 patients (42.4%) from this group preformed a diagnostic examination [compared to 5 patients (14.3%) in the control group], and 6 patients (3 were not given a result at the time of the second conversation) were diagnosed as having osteoporosis or osteopenia (compared to 2 in the control group).

The differences between the two groups were statistically significant (P=0.0003).

**Conclusions** — Patients who suffered from a fracture of the distal radius and received an explanation about the fracture and in addition received a letter with an explanatory pamphlet and an appeal to their family physician had a better chance to undergo a diagnostic examination for osteoporosis and to receive preventive treatment, if needed!

It is of great importance that patients understand the connection between the current problem for which they are receiving treatment in the ER and the possibility that there is an underlying cause and the importance of undergoing a diagnostic examination. In addition the connection between the hospital and the community is very important in increasing the number of patients diagnosed thus saving them a lot of suffering and the system a lot of money.


10. Ann Cranney, Peter Tugwell, Adachi j & al, Osteoporosis methodology group, and the Osteoporosis Research Advisory Group:

**Meta-analyses of therapies for postmenopausal osteoporosis. III. Meta-analysis of risedronate for the treatment of postmenopausal osteoporosis.**


11. Socrates E. Papapoulos, Sara A. Quandt, Uri A. Liberman, Marc C. Hochberg and Desmond E. Thompson: **Meta-analysis of the efficacy of alendronate for the prevention of hip fractures in postmenopausal women.**

Osteoporos Int. 2005 May;16(5):468-74.


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