

WORLD CONGRESS
ON OSTEOPOROSIS,
OSTEOARTHRITIS AND
MUSCULOSKELETAL
DISEASES

VIRTUAL CONGRESS

March 24-26, 2022



2022 VIRTUAL



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AbstractBook

Conclusion: Intravenous bisphosphonate treatments were generally more acceptable to patients, perceived as more straightforward to engage in, although a portion of patients on oral bisphosphonates were satisfied with their current treatment. Further research is needed to identify whether findings are applicable to other patient groups.

References:

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Acknowledgement: The authors would like to thank the National Institute for Health Research (Health Technology Assessment) for funding this research.

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THE RELEVANCE OF THE REMS TECHNOLOGY FOR THE ASSESSMENT OF BONE HEALTH STATUS IN A MALE POPULATION

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Objective: To evaluate the diagnostic accuracy of the ultrasound-based densitometric technology radiofrequency echographic multispectrometry (REMS) in the diagnosis of osteoporosis in a population of adult males based on lumbar spine scans in comparison with the standard DXA.

Methods: A cohort of Caucasian males was enrolled in the study. Inclusion criteria were: age between 30-65 y, BMI less than 40 kg/m², no significant walking impairments and lumbar spine DXA medical prescription. All the enrolled patients underwent lumbar spine scans with both DXA and REMS. The agreement between REMS and DXA-measured BMD was expressed by the Pearson correlation coefficient and Bland-Altman method. The classification into patients "with osteoporosis" or "without osteoporosis" was carried out considering the conventional T-score threshold (-2.5) for both techniques independently. The accuracy of the diagnostic classification was evaluated by the assessment of sensitivity and specificity considering the standard DXA as reference.

Results: A total of 224 men were included in the analysis, with a mean age of 50.25±10.63 y. The REMS technology displayed the capacity to discriminate patients with osteoporosis from the healthy ones with a sensitivity of 90.00% and specificity of 92.39%. Considering the three diagnostic classes (healthy, osteopenia, osteoporosis), the diagnostic concordance between technologies reached 87.05%.

Conclusion: REMS, applied to the lumbar spine site, is a reliable technology for the diagnosis of osteoporosis in men. This evidence corroborates its high diagnostic performance already observed in previous studies carried out in female populations [1, 2, 3].

References

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INDICES AND FORMS OF AGGRESSION IN PATIENTS WITH RHEUMATIC DISEASES

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Objective: The study of immunobiological and psychosomatic factors of predisposition for the development of rheumatic diseases remains relevant. Aggression is one of the basic emotions of a person, its suppression and repression can act as an important factor in the development of a psychosomatic symptom. The aim of this study was to study the indices and forms of aggressiveness in rheumatological patients.

Methods: 37 patients with rheumatoid arthritis (27 patients) and systemic lupus erythematosus (10 patients) were examined. The study was carried out using the Bass-Darky Test for the Level of Aggression (1957).

Results: The index of aggressiveness in 56.75% of the subjects was below the norm, in 40.55% the norm of aggressiveness was revealed, and only 2.7% showed high levels of aggressiveness. The index of hostility in 59.45% of the subjects was within the normal range, in 32.43% high hostility was revealed, in 8.1% of the subjects the hostility was low. The most characteristic form of manifestation of aggression is guilt (76.1±21.12 points in average). The indicators of indirect aggression (59.7±22.81) and resentment (55.2±22.81) turned out to be high. Less pronounced were the indices of verbal aggression and irritation - 49.3±22.35 and 47.2±21.12 points in average, respectively. Patients are least prone to manifestations of suspicion (44.9±27.97), physical aggression (41.6±25.02) and negativism (34±23.97).

Conclusion: The data obtained indicate that patients are more prone to manifestations of hostility than direct aggressiveness, i.e., hostile tendencies in this group of patients remain unreacted. The mechanisms of the development of the disease are based on both psychological (through guilt) and autoimmune self-destruction. Psychosomatic symptoms can act as unconscious self-punishment designed to alleviate feelings of guilt. It is necessary to provide not only medical, but also psychological assistance to rheumatic patients. Psychological correction should be aimed at overcoming tendencies to self-destruction, feelings of guilt and

resentment, at reducing hostility and developing a sense of security, as well as at developing skills for constructively responding to aggressive impulses.

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VERTEBRAL FRACTURE AS RISK FACTOR FOR SUBSEQUENT VERTEBRAL FRACTURE: ICD-10 BASED ANALYSIS OF A REAL-WORLD DATABASE

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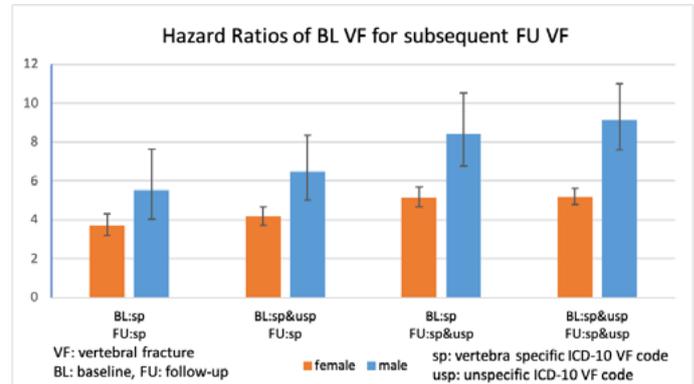
Objective: Large sample size real world databases allow multi-factorial fracture risk modeling. However, vertebral fracture (VF) risk modeling is hampered by ambiguities of ICD codes. We developed an analysis scheme that largely eliminates repeated coding to yield accurate estimates of VF risk.

Methods: In a representative German health insurance data set we evaluated the 19 most frequently used ICD-10 VF codes, including 10 that are specific to 1 or 2 vertebral levels (sp) plus 9 level unspecific codes (usp). VF incidence was evaluated for a 4-y baseline (BL) and a 3-y follow-up (FU) period. We identified the first incidence of a VF during FU with a VF ICD code different from any VF ICD code of that patient during BL, thus eliminating repeated recording of the same fracture. Here we analyzed subjects with 0 or 1 BL VF code, excluding other patients. Impact of BL VF on subsequent VF incidence was expressed as age-adjusted Cox proportional hazard ratio (HR).

Results. Among 242,478 subjects (154,393 women, 88,085 men age 70 to age 90) we identified 2585 and 684 incident sp-coded baseline VF in women and men, respectively. HR for sp codes was 3.7 (95%CI. 3.2-4.3) for women and 5.6 (4.0-7.6) for men. Allowing additional usp codes in BL enriched the sample to 4,667 and 1,007 BL VF, respectively with only a limited impact on HRs (+13% for women, +17% for men). Allowing additional usp codes also during the FU period led to larger increases of HRs by +40% in women and +60% in men reflecting the broader range of VF outcomes.

Conclusion: Employing our analysis scheme, addition of usp ICD codes to BL VFs substantially enhanced fracture numbers and thus study power, with only a limited impact on HRs (+10-20% if allowed in BL). This approach may thus be used to evaluate multivariate risk models for VF employing real-world data sources.

Acknowledgement: This study was supported by an unrestricted grant by UCB Pharma.



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ESTABLISHMENT OF IN VITRO MESENCHYMAL STEM CELLS MODELS OF GORHAM-STOUT SYNDROME: AN EXTREMELY RARE BONE DISEASE

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Objective: To evaluate the biological and molecular changes at the base of the mineralization process which characterize the Gorham Stout disease (GSD).

Methods: Bone marrow cells were obtained from a patient with GSD. After enzymatic digestion, mechanical dispersion and centrifugation the cell pellet was incubated with an erythrocyte lysis buffer and the remaining cells were cultured in growth medium at 37°C in humid atmosphere with 5% CO₂. The characterization of isolated cells as mesenchymal stem cells has been done by studying the expression of mesenchymal and hematopoietic stem cell markers, by evaluating their differentiation potential through adipogenic and chondrogenic differentiation assays and their clonogenic potential through the colony forming unit (CFU) assay.

Results: Isolated cells, obtained from a GSD patient, called as BMSC-GS-1 have been characterized as mesenchymal stem cells, observing the presence of the mesenchymal stem cells markers (i.e., CD44, CD90, CD105 and STRO1) and the complete absence of the hematopoietic stem cells markers (i.e., CD34 and CD45). Furthermore, adipogenic and the chondrogenic differentiation assays confirmed their ability to differentiate into two of the four mesenchymal stem cell-derived cell lines, adipocytes and chondrocytes. Finally, the clonogenic rate observed was more than 30% through the CFU assay.