Results: A total of 320 patients were obtained, 17 discarded (3 other fracture locations, 1 duplicate, 6 high energy trauma fractures and 8 had other pathologies than osteoporosis that justified the fracture). Mean age was 83.3 ± 7.9 years, 223 (73.6%) women. Prior to admission, 43 patients (14%) took calcium and/or vitamin D, 10 (3%) some antiosteoporotic drug and 20 (7%) both. 230 patients (76%) did not receive treatment. 102 exits (33.7%) occurred in the 2 years after the fracture. In the post-discharge analysis, 30 patients were discarded (17 died during admission and 13 in the subsequent month), since it was not possible for them to be treated. After discharge, 49 patients (18%) receive Calcium and/or Vitamin D, 15 (5%) some antiosteoporotic drug and 37 (14%) both, leaving 172 patients (63%) without treatment. There were 12 new hip fractures (4.0%). There is a greater proportion of deaths in men (43.8% vs. 30% in women, $p = 0.026$) and in patients not treated before the fracture (33.2% vs 11.6% calcium-Vit D, $p < 0.001$, 30.5% vs 9.4%, antiosteoporotic treatment $p = 0.002$). The multivariate analysis found lower probability of having received treatment in men (RR 0.34 IC 95% (0.16-0.72), $p = 0.005$) and with more age (RR 0.95 IC 95% (0.92-0.98), $p = 0.004$). After correcting with age: the risk of death in men is 83% higher than in women ($p = 0.035$). The probability of exits increases by 10% for each additional year of life. Treatment with calcium and/or vitamin D after discharge is a protective factor against mortality from any cause ($p = 0.037$).

Conclusion: Percentage of patients receiving drug treatment after suffering an osteoporotic hip fracture is very low. This is accentuated in males, and at an older age, populations that also have higher mortality rates in the two years after the fracture.

REFERENCE

- [1] Weaver J, et al. Prevalence and Cost of Subsequent Fractures Among U. S. Patients with an Incident Fracture. *J Manag Care Spec Pharm* 2017; 23:461-71.
- [2] León-Vázquez F, et al. Prevención de fractura osteoporótica en España: uso de fármacos antes y después de una fractura de cadera. *Rev Osteoporos Metab Miner* 2015; 7:54- 23
- [3] Van der Velde R.Y., et al. Trends in oral anti-osteoporosis drug prescription in the United Kingdom between 1990 and 2012: variation by age, sex, geographic location and ethnicity. *Bone*. 2017; 94: 50-55.

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AB0859

THE SERUM CREATININE TO CYSTATIN C RATIO: A POSSIBLE NEW SURROGATE MARKER FOR BONE MINERAL DENSITY

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Background: Bone mineral density (BMD) measured using dual-energy X-ray absorptiometry (DEXA) is one of the most important markers for osteoporosis diagnosis. The serum creatinine-to-cystatin C ratio (Cr/CysC) is in focus as a sarcopenia marker because it represents total muscle volume. Recently, Cr/CysC was suggested to have correlation with bone fragility fracture risk [1].

Objectives: This study aimed to assess whether Cr/CysC is correlated with BMD.

Methods: BMD at the lumbar spine (LS) and femoral neck (FN) were measured in women diagnosed with postmenopausal osteoporosis. Steroid induced osteoporosis patients were eliminated. Cr/CysC was assessed at the time. Clinical factors, such as age, concurrent rheumatoid arthritis treatment (RA), concomitant biological drug administration (BIO), body mass index (BMI), concurrent dementia treatment (dementia), number of comorbidities other than dementia (N.Com), frailty score (FS), bone fragility fracture (BFF), and drug intervention for osteoporosis (DI), were evaluated. Multivariate linear regression (MLR) was used to assess the correlation of these factors with BMD at each part. The relationships

between Cr/CysC and other parameters were statistically evaluated using MLR. Additionally, the relationships between the BMD change at each part and parameters were evaluated in the same manner.

Results: The study enrolled 207 subjects. BMD at the LS was significantly correlated with BMI and N.Com ($p < 0.01$), whereas BMD at the FN was significantly negatively correlated with age and was positively correlated with BMI, BFF, Cr/CysC, and DI ($p < 0.01$). Cr/CysC was significantly correlated with age, RA, BIO, dementia, FS, and BFF ($p < 0.01$).

After effect of age was corrected, BMD at the FN demonstrated significant positive correlation with Cr/CysC ($p < 0.01$), whereas no statistical correlation demonstrated between BMD at the LS and Cr/CysC. Both BMD at the LS and the FN demonstrated significant positive correlation with BMI ($p < 0.05$). No parameter significantly correlated with the BMD change at both the LS and FN ($p < 0.01$).

Conclusion: Cr/CysC represents BMD at the FN and is a candidate for BMD substitution.

REFERENCES

- [1] Komorita Y, et al. *Diabetes Res Clin Pract* 2018;146:202-10.
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AB0860

RECURRENCE OF VERTEBRAL FRACTURE IN PATIENTS WITH OSTEOPOROTIC VERTEBRAL FRACTURES: RETROSPECTIVE REVIEW IN MONCLOA UNIVERSITY HOSPITAL. PRELIMINARY RESULTS

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Background Current drugs for patients who suffer from established osteoporosis (OP) with osteoporotic vertebral fracture (VF) have demonstrated their efficacy with different levels of evidence for secondary prevention of fractures¹. In fact, this level of efficacy can be limited in real clinical practice, with pluripathological and previously polimedicated patients.

Objectives Main objective of this study is to describe the percentage of patients with VF in which the therapeutic goal of avoiding new VF during their follow-up has been achieved. As a secondary objective, clinical and therapeutic differences will be analyzed among distinct groups arisen from achieving or not the therapeutic goal.

Methods Retrospective, observational, longitudinal, descriptive study of patients from Rheumatology Department in Moncloa University Hospital who have suffered a osteoporotic VF.

Results 133 cases have been reviewed, 115 (86.5%) females and 18 males (13.5%). Average age is 72 years (+/- 7) and average follow-up time is 2.68 years (+/- 2.3). 25 cases (18.5%) were smokers, 9 (6.8%) oncologic patients, 33 (24%) with chronic corticotherapy and 28 (21%) with immune-mediated diseases. 81 patients (60.9%) had previous VF (0.933 fracture /patient) and 14 (10.5%) non-vertebral fracture (NVF). The average VF was 1.967/patient and 0.133/patient for NVF. 52 patients (39.1%) had received prior treatment for OP (36 Biphosphonate, 23 Denosumab, 5 SERM, 2 strontium ranelate and 1 teriparatide) and in 39 cases (29.3%) a cementoplasty was performed. Initial treatments prescribed by Rheumatology Department were Biphosphonates (48%), Denosumab (31%) and Teriparatide (21%). 35 patients received sequential-treatment (26.9%). 86.5 % of patients haven't presented new VF. 18 cases (13.5%) have been registered with new VF. This group is composed by 13 females and 5 males; the average age was 75 years (+/- 7.5) and the average follow-up time 2.8 years (+/- 2.46); 14 (77.8 %) patients presented previous VF and 3 (16.7 %) previous NVF. The average number of previous VF was 2.0/patient and 0.33/patient for NVF. 14 cases (78.8%) of new VF occurred during the first year of follow-up. The treatment they were receiving at the time of the new VF was in 8 cases with Denosumab (44%), 4 with Teriparatide (22%), 2 Alendronate (11%), 3 Risedronate (16%) and 1 case without treatment.

Conclusion These are preliminary data from a register for prognosis evaluation of patients who suffer VF in Moncloa University Hospital. A larger sample size is necessary to developed a strategic conclusion in this patients, pluripathological, with previous osteoporotic fractures and treatment. 78 % of new VF occurred during the first year of the follow-up, 44% of them were receiving Denosumab, 77% (vs. 58% of the patients without new VF) had previous VF and 44% (vs. 37% patients without new VF) had received previous OP treatment.