

stages. Incidentaloma was a frequent mode of presentation of earlier ACC stages; Stage I: 3/7 (42,9%), stage II: 7/18 (38,9%), stage III: 4/30 (13,3%) and stage IV: 4/46 (8,7%). Hormonal excess symptoms led to ACC diagnosis less frequently in early stages (stages I and II) (24%) than in later stages (stage III and IV) (47,3%), while the hormonal work up showed high prevalence of secreting tumors in both groups (58,8% and 88,7%). Mass-related initial symptoms were similar in both groups 36% vs 39%.

Conclusions: In our cohort, 61.5% of ACC tumors were larger than 10 cm at initial diagnosis. Seventy-three percent of ACC patients had an advanced ENSAT stage III or IV disease which is associated with a 5 years survival of less than 50%. Incidentalomas is a frequent mode of presentation in stages I and II, while clinical hormonal excess symptoms were more frequent in later stages III and IV. Early stage diagnosis presents a difficult challenge in ACC and new biomarkers are needed to improve the odds against this deadly cancer.

Bone and Mineral Metabolism OSTEOPOROSIS AND VITAMIN D

Understanding Why Older People with Low Trauma Fractures Die Prematurely

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There is increasing evidence that all proximal and not just hip fractures are associated with increased mortality risk. However, the cause of this increased mortality is unknown. We sought to determine the post-fracture trajectories of subsequent hospital admissions and mortality to develop an understanding of why patients with non-hip fractures die prematurely.

This nationwide Danish population-based study included all individuals aged 50+ years who sustained an incident fragility fracture between 2001 and 2014. High-trauma fractures or individuals with fracture prior to 2001 were excluded. Fracture patients were matched 1:4 by sex, age and comorbidity status with non-fracture subjects alive at the time of fracture. Comorbidities included 33 unique medical conditions of the Charlson or Elixhauser comorbidity index. We modelled the contribution of specific fractures on the risk of subsequent admissions or death within the following 2 years.

There were 212,498 women and 95,372 men with fracture followed by 30,677 and 19,519 deaths, respectively over 163,482 and 384,995 person-years of follow up. Mean

age at fracture was 72± 11 for women and 75± 11 for men. Proximal fractures including hip, femur, pelvis, rib, clavicle and humerus had increased mortality compared with their matched non-fracture counterparts with HRs ranging from 1.5-4.0, while distal fractures such as ankle, forearm, hand or foot fractures had similar or lower mortality risk.

Almost 75% of men and 60% of women had ≥1 comorbidity. For every additional comorbidity, risk of mortality increased for all fracture types. However, only for proximal fractures did the fracture itself independently increase mortality risk over and above co-morbidity status.

The 2-yr post fracture admission and mortality patterns differed between proximal and distal fractures. Proximal, but not distal fracture subjects had greater risk of any major hospital admission (including cardiovascular disease, cancer, stroke, diabetes, pneumonia and pulmonary disease) within 2 years compared with their non-fracture counterparts. Distal fractures in general had similar admission patterns as their non-fractured matched counterparts. Furthermore, 2 year mortality risk was increased for proximal fractures whether or not they were admitted to hospital post fracture. By contrast, mortality risk was similar or reduced for distal fractures compared with non-fracture controls.

This study has not only confirmed the increased mortality following proximal fractures but has demonstrated differing clinical trajectories between proximal and distal fractures that contribute to this increased mortality. These findings provide important insights as to why proximal fracture subjects die prematurely that may lead to specific avenues for intervention.

Neuroendocrinology and Pituitary NEUROENDOCRINE & PITUITARY PATHOLOGIES

Growth Hormone Deficiency and Replacement Therapy: Association with Health-Related Physical Fitness

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Objective: To compare health-related physical fitness (HRPF) in patients with severe adult growth hormone deficiency (AGHD) according to the deficiency onset phase, and to evaluate the effects of a six-months human growth hormone (rhGH) replacement therapy on HRPF, in a subgroup of patients. **Methods:** First arm: cross-sectional observational study at baseline of naive rhGH multiple pituitary hormonal deficiency (MPHD) hypopituitarism patients - adult-onset growth hormone deficiency (AO-GHD) versus child onset growth hormone deficiency (CO-GHD). Second