INCIDENT FRAGILITY FRACTURES UNDER ANTiresorbTIVE THERAPY IN A 76 YEAR OLD LADY: NEVER TOO LATE TO DISCOVER NEW CAUSES

ARHIRE AMALIA IOANA1, CARMEN GABRIELA BARBU2

1 ENDOCRINOLOGY, DIABETES AND METABOLIC DISEASES DEPARTMENT, ELIAS HOSPITAL, BUCHAREST, ROMANIA
2 "CAROL DAVILA" UNIVERSITY OF MEDICINE AND PHARMACY, BUCHAREST, ROMANIA

Pathologic antecedents:
- Atrial fibrillation
- Hypertension
- Severe osteoporosis (antiresorptive treatment with bisphosphonates in the last 2 years)
- Raynaud’s syndrome
- Amiodarone induced autoimmune hypothyroidism currently under treatment with L-Thyroxine

C.M., 76 years old female

Motives of admission
- the evaluation of antiresorptive therapy in the context of a recent rib fracture after coughing

Clinically:
- Normal BMI of 19.5 kg/m2
- Kyphosis with loss of more than 5 cm of height in the last 5 years with a height of 148 cm
- Raynaud’s syndrome with inflammatory signs of the hands
- Left bronchial rales
- BP of 110/70 mmHg with a HR of 125/min.

Biologically:

<table>
<thead>
<tr>
<th>Blood test</th>
<th>Value</th>
<th>Normal/Abnormal</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESR</td>
<td>38 mm/h</td>
<td>3-9 mm/h</td>
</tr>
<tr>
<td>Calcium</td>
<td>9.6 mg/dl</td>
<td>8.8-10.2 mg/dl</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>3.9 mg/dl</td>
<td>2.5-4.5</td>
</tr>
<tr>
<td>PTH</td>
<td>25 pg/ml</td>
<td>15-65 pg/ml</td>
</tr>
<tr>
<td>25OH vitamin D</td>
<td>31 ng/dl</td>
<td>20-100 ng/dl</td>
</tr>
<tr>
<td>TSH</td>
<td>5.50 mU/l</td>
<td>0.3-4.2 mU/l</td>
</tr>
</tbody>
</table>

Chest CT. confirmed the pulmonary fibrosis, the rib and vertebral fractures and raised the suspicion of systemic sclerosis

Fig 1 - a: Chest CT, pulmonary fibrosis, b: chest X-ray T9 and T10 vertebral fracture

Diagnostically:
- Severe osteoporosis with multiple fragility fractures
- Systemic sclerosis confirmed by the anti SCL70 antibodies
- Amiodarone induced autoimmune hypothyroidism currently under treatment with L-Thyroxine
- Atrial fibrillation
- Hypertension

Treatment:
- indication for Teriparatide
  - due to the newly increased fracture risk - the systemic sclerosis and incident fracture under antiresorbive treatment

Conclusion:
The pathology of severe osteoporosis, in our case, revealed new findings after less than 2 years of treatment, besides advanced age and possible effects of L-thyroxine replacement therapy we discovered that the established negative effects of the systemic sclerosis on the skeleton revealed the need for a complete reevaluation during follow-ups for osteoporotic patients.

- DXA: lumbar T score: -2.8DS, femoral neck T score: -2.9 DS
- Chest X-ray: 4th rib fracture, pulmonary fibrosis and a T9 and T10 vertebral fracture