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Management of Non-Traumatic Thoracics Vertebral Fractures in Elderly Female with Previous Malignant Tumor

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Abstract

The incidence of vertebral fractures in patients with osteoporosis is frequent. In elderly patients, the presence of vertebral fracture without history of trauma may be present. In addition, previous diagnosis of tumour pathology raises the suspicion of metastatic disease. The presence of known or unknown primary tumour raises the need for a correct diagnosis to tailor the best treatment. Mechanical pain and neurological compression have been described in both cases. Imaging tests, x-rays, CT and MRI may help the diagnosis. The existence of prior known tumour may not require the need of previous biopsy. Treatment can range from conservative treatment with bracing and analgesia, reinforcement techniques or decompression and stabilization in deformity or neurological deficit. The occurrence of vertebral fractures is not rare in patients with osteoporosis. It increases in older patients with concurrent comorbidities such as neoplasms. A former diagnosis of neoplasia requires a differential diagnosis with vertebral osteoporotic fracture. The clinical onset, a positive previous trauma history, and the imaging studies can help to find a correct diagnosis. Occasionally, the biopsy could not be required. The selection of the appropriate therapy is determined by the clinical course, the age of the patient, the prognosis of the primary tumour and the associated vertebral instability. Numerous treatment options are feasible, grading from conservative therapy with analgesic and spinal orthotics, physical therapy, to spinal decompression and stabilization when neurological symptoms are present. This late option can be suitable in older patients with vertebral osteoporotic fractures or metastatic disease. Some signs help to predict a poor evolution. On the CT, the affected vertebra showed the cleft sign accompanied by the intervertebral vacuum sign. These two findings are synonymous with the vertebral body osteonecrosis secondary to trauma in patients with osteoporosis or Kummel disease. Furthermore, we can identify in MR signs that predict a poor progress of the condition, i.e. the T2-weighted images (confined high intensity and diffuse low intensity patterns) which showed a high probability of pseudoarthrosis. The correlation between the fluid sign and the likelihood of osteonecrosis of the vertebral body, in the first 5 months after the trauma, has been described recently. This sign is more specific than the vacuum sign in elderly patients. Other causes of vertebral fracture pathology such as metastasis, infection and multiple myeloma should be ruled out.

Biography



David Ruiz Picazo is from Department of Orthopedic Surgery, Complejo Hospitalario Universitario De Albacete, Spain. His research interests are Bone Mineral Density Fracture Osteoporosis Vitamin D Hip Bone Metabolism Calcium Epidemiologic Studies Clinical Epidemiology. His research had been published in a number of major international journals. He also worked on Non-traumatic, Thoracic vertebral fractures; Malignant tumour. Later he became Medical specialist with clinics in different locations; specialization: disorders such as systemic auto-immune diseases, vascularise, foreign body reactions, immune deficiencies and unsolved clinical problems. He was appointed as Head of the Immunology Laboratory as well as Medical specialist, Department of Internal Medicine, Rheumatology and Gastro-enter ology in University Hospital Maastricht, Maastricht in 2000. He has published >400 articles in national and international peer-review journals, has >15.000 citations, H index 60 (Google Scholar), he wrote >40 chapters in books, is member of the Editorial Board of many medical journals. He was a member of the committee for the development guidelines for idiopathic pulmonary fibrosis and the new classification of idiopathic interstitial pneumonias. He has been elected as foundation member of the Fellows of the European Respiratory Society (FERS).

Importance of Research

The occurrence of vertebral fractures is not rare in patients with osteoporosis. It increases in older patients with concurrent comorbidities such as neoplasms. A former diagnosis of neoplasia requires a differential diagnosis with vertebral osteoporotic fracture. The clinical onset, a positive previous trauma history, and the imaging studies can help to find a correct diagnosis. Occasionally, the biopsy could not be required. The selection of the appropriate therapy is determined by the clinical course, the age of the patient, the prognosis of the primary tumour and the associated vertebral instability. Numerous treatment options are feasible, grading from conservative therapy with analgesic and spinal orthosis, physical therapy, to spinal decompression and stabilization when neurological symptoms are present. This late option can be suitable in older patients with vertebral osteoporotic fractures or metastatic disease. A seventy-eight year old woman presented with low back pain of three months of duration, without previous trauma history. On physical examination, she exhibited mechanical pain which exacerbates by standing and walking and improved with rest. She had no neurologic deficit on lower limbs.

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About Hospital



The General University Hospital of Albacete is a public hospital of the Castilla-La Mancha Health Service located in the Spanish city of Albacete. Inaugurated in 1985 by the Minister of Health Ernest Lluch, it is one of the main reference hospitals in Castilla-La Mancha. It serves a million people.

The hospital is connected through the Circunvalación footbridge with the Faculty of Medicine of the Biosanitary Campus of Albacete, belonging to the University of Castilla-La Mancha. After the transfer of the patients admitted to the old University Residence, the Albacete. University General Hospital began its journey, which was inaugurated on April 18, 1985 by the Minister of Health, Ernest Lluch . The new hospital, built on the site of the Hospital de San Julián , began operations with a staff of 1,400 healthcare professionals. 7 8

In 2002 the hospital went from depending on the National Institute of Health (INSALUD) to the Castilla-La Mancha Health Service (SESCAM), after the transfer of health competencies from the Ministry of Health to the Government of Castilla-La Mancha. Throughout its history, the hospital has undergone a series of renovations, growing in facilities, equipment, specialties and personnel.

It is one of the reference hospitals in Castilla-La Mancha, providing services both for the population of the province of Albacete and for that of other nearby provinces and autonomous communities. In the coming years, it will undergo a comprehensive reform to adapt it to the new care needs, although many are calling for a new large hospital, complementary to the current ones, such as have been built or are being built in the rest of the region's capitals and as as announced by the current president of Castilla-La Mancha Emiliano García-Page, later retracting. In this sense, the College of Physicians of Albacete has created a platform to request the construction of a new hospital.

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