Thyroid carcinoma: A pathological fracture of the humerus: Can it be treated conservatively?

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CASE REPORT

We report a case of a 65-year-old woman, with poor oral health and a history of thyroid cancer since a year ago under chemotherapy, suddenly presented severe pain with total functional impotence of the left shoulder then she was transferred to the emergency department. Upon admission, she was conscious, in good general health but palpation and mobilization of the left shoulder were painful. Plain radiographs of the left shoulder showed a fracture of the proximal humerus with lytic lesions (Figure 1) prompting the patient to undergo surgery. But, the patient refused the surgical treatment and she requested nonoperative treatment. Thus, after an external maneuver trying to reduce the fracture, we immobilized the shoulder using a splint with elbow to the body and prescribed an association of oral analgesia, anti-inflammatory drugs and vitamin-D therapy along with a diet rich in calcium, then she was reviewed weekly. At six weeks, the consolidation was obtained (Figure 2A) and so a progressive rehabilitation of the shoulder was allowed. At 12 months of follow-up, she regained the function of the shoulder for activities of daily living (Figure 2B) with no pain residual.

DISCUSSION

Pathological fractures of long bones are estimated of 10% in patients with bone metastases [1]. The localization of bone metastases at the humerus often presents late and induces a wide bone loss resulting in severe pain and disability [2] and it is reported to occur in only 8—10% of metastases to this bone [3]. Nonoperative management rarely provides complete pain relief or return of arm...
function, thus, surgery is now recommended for intractable pain and impending or established pathologic fractures [4]. The goals of operative treatment are to provide fracture stability to facilitate bone healing, pain relief, and restoration of a satisfactory function of the affected limb [5].

On the other hand, although the bisphosphonates are valuable in the management of skeletal complications of malignancy, they are not recommended for patient with poor oral health because they increase the risk of jaw osteonecrosis [6, 7] reason why, in our case who was under chemotherapy and for more security, we elected for a prescription of vitamin D and a diet rich in calcium with no bisphosphonates.

At last, our patient presented a pathological fracture of the proximal humerus prompting her to undergo surgery but the surgical treatment was refused and so we elected for unusual approach treatment of this type of fracture with good outcome at the last follow-up. Thus, our case is among the rare cases reported to be treated conservatively with no bisphosphonates therapy and that promoted a satisfactory result.

**CONCLUSION**

Although the management of the pathological fracture is surgical, we reported an unusual management of pathological fracture of the humerus. We emphasized, through this observation, that the family physician could also manage this type of fracture conservatively especially for patients who are far from a specialized hospital structural or who cannot afford the charges of the surgical treatment.

**Keywords:** Conservative treatment, Humerus, Pathological fracture

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**REFERENCES**


**Author Contributions**

Naoufal Elghoul – Conception of the work, Design of the work, Acquisition of data, Analysis of data, Interpretation of data, Drafting the work, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Omar Zaddoug – Design of the work, Acquisition of data, Interpretation of data, Drafting the work, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

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Authors declare no conflict of interest.

Data Availability
All relevant data are within the paper and its Supporting Information files.

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