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BACKGROUND: Bisphosphonates, inhibitors of osteoclasts, have been shown to alleviate many of the devastating consequences associated with metastatic bone disease. However, recent reports have shown that bisphosphonates may cause osteonecrosis of the jaws. Since the publication of these initial reports, the authors have treated several patients with osteonecrosis of the jaws who had a history of receiving bisphosphonate therapy.

METHODS: The authors reviewed the medical records of patients who visited their clinic between September 2003 and December 2004 and who had osteonecrosis of the jaws and a history of having received bisphosphonate therapy but no irradiation to the head and neck.

RESULTS: Eleven patients (four female and seven male) with a mean age of 69 years were included in this report. They had received bisphosphonate therapy for a mean duration of 34 months. Radiographic data showed loss of bone density at sites of osteonecrosis, and histologic examination demonstrated necrosis of bone without evidence of metastases.

CONCLUSIONS AND CLINICAL IMPLICATIONS: Further research is required for better understanding of the role of bisphosphonates in the development of osteonecrosis of the jaws. Until more is known, the authors recommend that measures be taken to prevent osteonecrosis those at risk, including identifying patients with a history of having received bisphosphonate therapy before they undergo dental surgery. To help identify such patients, the authors propose the use of a screening questionnaire. When feasible, physicians should consult with their patients' general dentists or oral surgeons before patients begin bisphosphonate therapy.