

INTRODUCTION

Osteoradionecrosis (ORN) is a severe long-term complication associated with fibro-atrophic and destructive vascular effects of head and neck radiation therapy. Pentoxifylline, tocopherol and clodronate (PENTOCLO), protocol has been described as a promising option by inducing mucosal and bone healing. Nevertheless, some countries do not have all drugs of the protocol offered by the public health system. The aim of the present study was to report a small case series of severe ORN adequately managed with modified PENTOCLO.

METHODS

Four ambulatory patients clinically and radiographically diagnosed with grade III ORN were included in the study. All individuals have received head and neck radiation therapy for malignant tumors and were given pentoxifylline (400mg twice a day), tocopherol (1000UI once a day) and alendronate (5mg/week). In addition, patients were put on amoxicillin 875mg plus clavulanate 125mg twice a day for 30 days. The endpoints included symptom control, trismus and mucosal healing.

RESULTS

All patients with age ranging from 47 to 65 years. All patients presented with significant pain and acute trismus and symptoms were controlled after 25-42 days. Partial or complete mucosal healing was achieved by all patients. Flare ups were observed in 1 patient after 6 months of treatment, with rapid response to a new cycle of the same antibiotics.

Table 1. Clinical features of grade III ORN patients

Patient	Age	Tumor	Treatment	Cause of ORN	Site	Pathological fracture	Pain
A	49	Tongue squamous cell carcinoma	XRT + Chemo	Extraction	Bilateral posterior mandible	Yes	Severe
B	49	Metastatic leiomyosarcoma	XRT + Chemo + zoledronic acid	Extraction	Right posterior mandible	Yes	Severe
C	65	Laryngeal	XRT + Chemo	Extraction	Left posterior mandible	Yes	Severe
D	47	Oropharyngeal	XRT	Spontaneous	Left posterior mandible	No	Severe

All patients are male. XRT = radiation therapy; Chemo = chemotherapy. ORN= Osteoradionecrosis.

Table 2. Response to modified PENTOCLO.

Patient	Pain resolution	Clinical resolution	Mucosal healing	Trismus	Trismus resolution
A	30	24	Total	No	-
B	30	12	Partial	Yes	Partial
C	45*	19	Partial	Yes	Partial
D	30	6	Partial	No	-

All patients are male. Pain resolution in days. * First re-evaluation. Clinical resolution= symptomatic control and mucosal healing, in months.

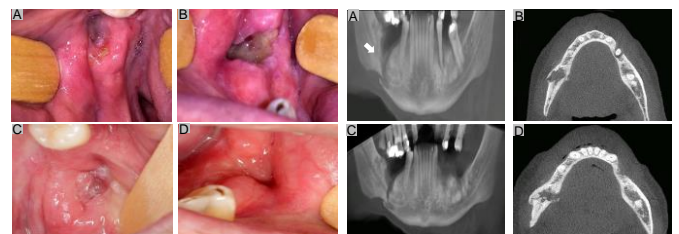


Figure 1. A and B. Bilateral exposed necrotic bone at initial consultation. C and D. Complete mucosal healing after 24 months of therapy. Figure 2. A and B. Initial presentation of a bilateral ill-defined lytic lesion in the mandibular body, and pathological fracture (arrow) in the right mandibular body. C. Lack of radiographic alteration after 24 months of treatment. D. Evidence of small bone formation in the fractured area.

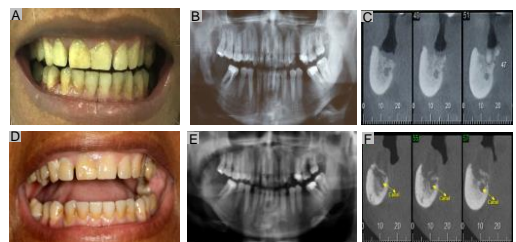


Figure 3. Initial consultation. A. Severe trismus. B. Extensive osteolytic lesions in the right mandibular body. C. CT scan - Transaxial reconstruction ORN evidencing a diffusely hyperdense area. Response to 12 months of treatment. D. Partial reduction of trismus. E. Pathologic fracture on the left mandibular body. F. Reduction of bone density.

CONCLUSIONS

Adapting the PENTOCLO protocol to distinctive clinical realities is feasible and may promote significant control of advanced ORN cases.

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