



## CASE REPORT

# Recurrence of ameloblastoma involving iliac bone graft after 16 years

Tong Su <sup>a</sup>, Bing Liu <sup>a</sup>, XinMing Chen <sup>b</sup>, WenFeng Zhang <sup>a</sup>, YiFang Zhao <sup>a,\*</sup>

<sup>a</sup> Department of Oral and Maxillofacial Surgery, School and Hospital of Stomatology, Wuhan University, 237 Luoyu Road, Wuhan 430079, China

<sup>b</sup> Department of Oral Pathology, School and Hospital of Stomatology, Wuhan University, Wuhan 430079, China

Received 16 October 2005; accepted 17 October 2005

### KEYWORDS

Recurrence;  
Ameloblastoma;  
Iliac bone graft

**Summary** The condition with recurrence of ameloblastoma in autogenous iliac bone grafts is very rare. This report presents such a case from a 55-year-old female.

© 2005 Elsevier Ltd. All rights reserved.

## Introduction

Ameloblastomas are benign, locally aggressive, polymorphic neoplasms of proliferating odontogenic epithelial origin with a high recurrence rate. More than 50% of recurrences occur within 5 years after surgery.<sup>1</sup> Recurrence of ameloblastoma in autogenous iliac bone graft after a long period of more than 5 years is very rare. This report presents such a case.

## Case report

A 55-year-old female came to our hospital because of swelling of mandible on the left side for 5 months. A panoramic radiograph showed an area of radiolucency at mental and molar region on left side of the mandible (Fig. 1). In her history, she noticed the same symptom and came to our hospi-

tal in 1989. A panoramic radiograph showed an area of radiolucency at molar region on left side of the mandible (Fig. 2). A block resection of the mandible was done at that time. An immediate reconstruction using a free transfer of the iliac crest fixed by trans-osseous wires was then performed (Fig. 3). Ameloblastoma was diagnosed under microscope after operation. In April 2005, another operation which involved segmental mandibulectomy and immediate free fibula osseous myocutaneous flap reconstruction was performed. Ameloblastoma was pathologically diagnosed.

## Discussion

Recurrence of ameloblastoma is thought to be related predominantly to inadequate surgical removal of the primary tumor.<sup>2</sup> However, the recurrence may be further attributable to these reasons: firstly, the presence of small islands of neoplastic tissue in the cancellous bone at the margins of the specimen or the implantation of tumor cells during enucleation.<sup>3</sup> Secondly, the consequence of soft tissue recurrence.<sup>4</sup> The overlying mucosa should be included in

\* Corresponding author. Tel.: +86 27 87647434; fax: +86 27 87873260.

E-mail address: [yifang@public.wh.hb.cn](mailto:yifang@public.wh.hb.cn) (Y. Zhao).

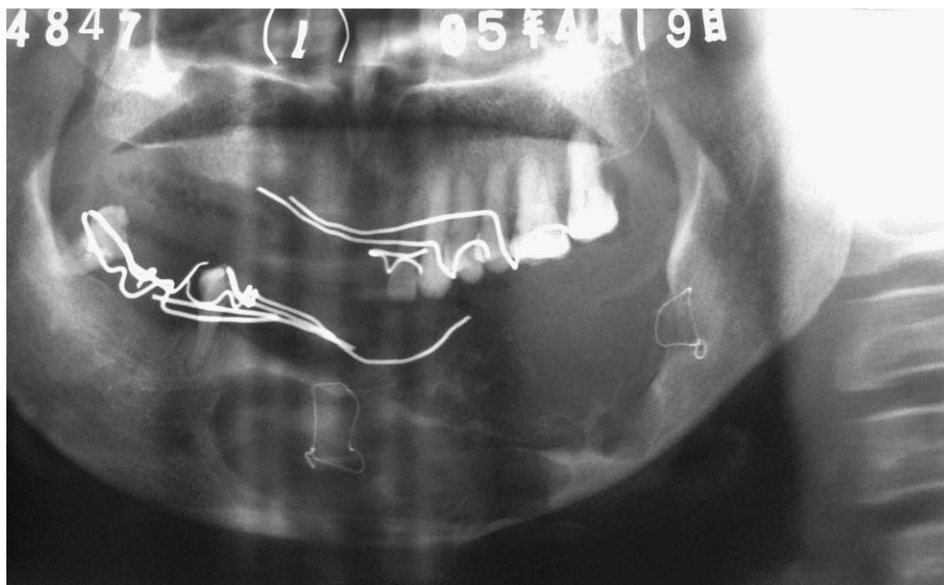


Figure 1 Panoramic radiograph in 2005 showed multilocular radiolucent area in the bone graft.



Figure 2 Initial image of the mandibular ameloblastoma in 1989.

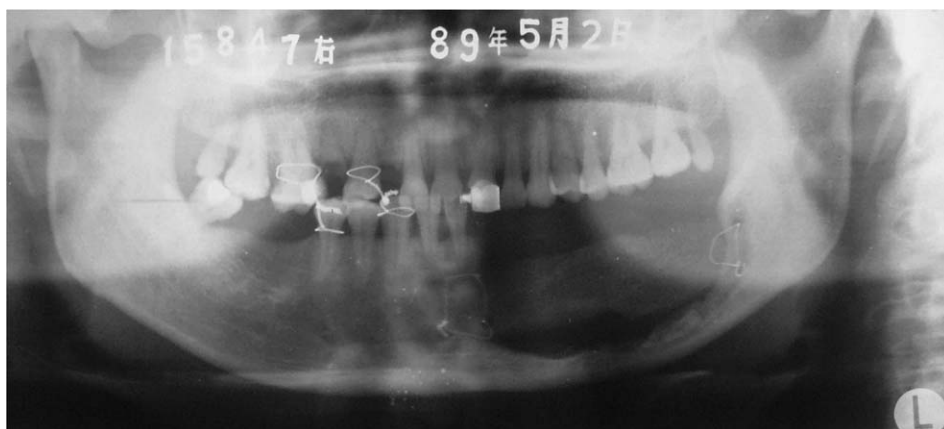


Figure 3 Reconstruction of the mandible using the iliac crest after a block resection in 1989.

the resection if the tumor invades the alveolus and perforates through the alveolar bone. Thirdly, tumor seeding. This should be considered as the most important causative factor in the recurrence of ameloblastoma in bone grafts.<sup>4</sup>

The pathogenesis of recurrent ameloblastoma involving bone graft is not easy to explain. In some cases, the initial microscopic type of ameloblastoma does not seem to influence the development of recurrence.<sup>5</sup> The difference in pathogenesis between recurrences after short time and long period need more research.

## Conclusion

It is recommended that block excision with at least 1 cm of normal bone be required when the resultant defect is reconstructed with autogenous bone graft. A long-term followed-

up of more than 10 years at regular intervals is also recommended after the operation of classic ameloblastoma.

## References

1. Reichart PA, Philipsen HP, Sonner S. Ameloblastoma: biological profile of 3677 cases. *Eur J Cancer B Oral Oncol* 1995;31:86–9.
2. Gold L. Biologic behavior of ameloblastoma. *Oral Maxillofac Surg North Am* 1991;3:21.
3. Adekeye Eo, Mccallum Lavery K. Recurrent ameloblastoma of the maxillo-facial region. Clinical features and treatment. *J Maxillofac Surg* 1986;14:153.
4. Zachariades N. Recurrence of ameloblastoma in bone grafts: Report of 4 cases. *Int J Oral Maxillofac Surg* 1988;17:316.
5. Silvio D, Franco T, Fausto P. Ameloblastoma of the mandible involving an autogenous bone graft. *J Oral Maxillofac Surg* 1998;56:1187–91.