

## Oral Manifestation of Acute Myeloid Leukemia

### A Case Report

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### Introduction

Acute Myeloid Leukaemia

Leukaemiae are a group of neoplastic diseases, which are characterized by proliferation of immature white blood cells in the bone marrow and blood, with AML being the most frequent form of leukaemia in adults.

### Objectives

Oral manifestations of AML are featured by rapidly developing, in many cases massive and often painful enlargements of the gingiva. Sometimes they occur in combination with ulcerations of the papilla tips or colonization with *Candida albicans*. In some cases though the oral mucosa appears remarkably pale.

### Material and Methods



Fig. 1: Generalized inflammation and hyperplasia of the gingiva



Fig. 2: Hyperplasia of the gingiva with necrotic papillae on the palatal side

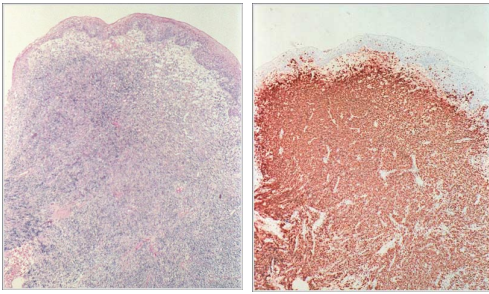


Fig. 3-4: Histological evaluation of the biopsy with gingival infiltration

#### The Case

A 34 year old female patient with generalized gingival enlargement was referred to us by the medical clinic with the diagnosis of AML. Clinical findings were recorded photographically and a biopsy was taken from the palatal gingiva and prepared for histological evaluation. The patient passed away five weeks after consultation.

#### Results

##### Histology

A covering, partly keratinized squamous epithelium is represented with the typical layering. Tightly lying blasts made of non-circular nuclei with partly prominent nucleoles infiltrate the squamous epithelium.

#### Conclusions

In case AML is suspected, an immediate haematological control is necessary. Dental treatment is limited to careful reduction of plaque. Before subgingival treatment an internistic consultation is highly recommended due to the risk of bacteraemia. The histology corresponds to an infiltration of the gingiva in the course of AML.

This case report documents the association of gingivo-periodontal alterations with white blood cell diseases, i. e. Acute Myeloid Leukaemia. It shows, that a careful anamnesis of every patient is mandatory. By referring suspected patients for haematological investigation, the dentist may aid in the detection and early treatment of the systemic disease.

#### Literature

- Pogrel, M.A.; Int J Oral Surg 7(2): 119-122, 1978  
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Willman, C.L.; Leukemia 15: 690-694, 2001  
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## # 328 Oral Manifestations of Acute Myeloid Leukemia

### A Case Report

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#### Acute Myeloid Leukemia

Leukemias are a group of neoplastic diseases, which are characterized by proliferation of immature white blood cells in the bone marrow and blood, with AML being the most frequent form of leukemia in adults.

#### Oral Manifestations

Oral manifestations of AML are featured by rapidly developing, in many cases massive and often painful enlargements of the gingiva. Sometimes they occur in combination with ulcerations of the papilla tips and colonization of *Candida albicans*. In some cases though the oral mucosa appears remarkably pale.

#### The Case

A 34 year old female patient with generalized gingival enlargement was referred to us by the medical clinic with the diagnosis of AML. Clinical findings were recorded photographically and a soft tissue biopsy was taken and prepared for histologic evaluation. The patient passed away five weeks after consultation.



Fig. 1 Generalized inflammation and hyperplasia of the gingiva



Fig. 2 Hyperplasia of the gingiva with white coverings on the palatal side



Fig. 3-4 Histological evaluation of the biopsy with gingival infiltration

#### Histology

A covering, not keratinized squamous epithelium is represented with the typical layering. Tightly lying blasts made of non-circular nuclei with partly prominent nucleoles infiltrate the squamous epithelium.

#### Discussion

In case AML is suspected an immediate hematological control is necessary. Dental treatment is limited to careful reduction of plaque. Before subgingival treatment of the patient internistic control is highly recommended due to the risk of bacterial infiltration. The histology corresponds to an infiltration of the gingiva in the course of AML.

#### Conclusion

This case report documents the association of gingivo-periodontal alterations with white blood cell diseases, i. e. Acute myeloid leukemia. A careful anamnesis must be mandatory. By referring such patients for hematologic investigation, the dentist may aid in the detection and early treatment of the underlying malady.

#### References

1. Pogrel, M.A.; Int J Oral Surg 1978 Apr; 7(2): 119-22
2. Orbak, R. and Orbak, Z; J Nihon Univ Sch Dent 1997 Jun; 39(2): 67-70 1997
3. Willman, C.L.; Leukemia 2001, 15:690-694
4. Wu, J. et al.; J Periodontol 2002 Jun;73(6):664-8.