



# Gingival Hyperplasia In Relation To Dental Implants With No Bacterial Influence. Report Of A Case.

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## AIM

The aim of this case report is to demonstrate a case of bilateral granuloma pyogenicum adjacent to implants in a patient treated with vertical bone augmentation .

## MATERIALS AND METHODS

A 55-year-old female, presented at the Department of Oral Surgery, Medical University of Warsaw for treatment of exophytic lesions in relation to dental implants on both sides in the mandible. With respect to the patient's dental history, she had implant supported fixed prostheses on both sides in mandible after vertical bone augmentation. The lesions were observed 7 months after implantation and 3 weeks after crowns were placed. Oral examination revealed two nodular lumps of 4cm diameter on right side and 0,5 cm diameter on left side.

A 2-year treatment was conducted with a number of different strategies, involving complete excision of the lesions, curettage of exposed implant threads, irrigation with chlorhexidine,during which the pathologic lesions recurred several times and were consequently excised. Surgical samples from the soft tissue surrounding the implants were retrieved for histological analysis. The hyperplastic lesions were also evaluated microbiologically. The test was based on Real-Time PCR and used for qualitative and quantitative analysis of 9 types of bacteria that are probable to accompany periimplantitis.

## RESULTS

The histopathological assessment revealed a pyogenic granuloma. The result of RT-PCR analysis showed presence of mainly Eikenella corrodens and small amounts of Treponema forsythensis and Fusobacterium nucleatum. We excluded microbiological infection to be a causative factor of the recurring granuloma. The localised tissue reaction was severe enough to decide on removal of all the implants. Afterwards, there was no relapse of hyperplasia at a 3-year follow-up.

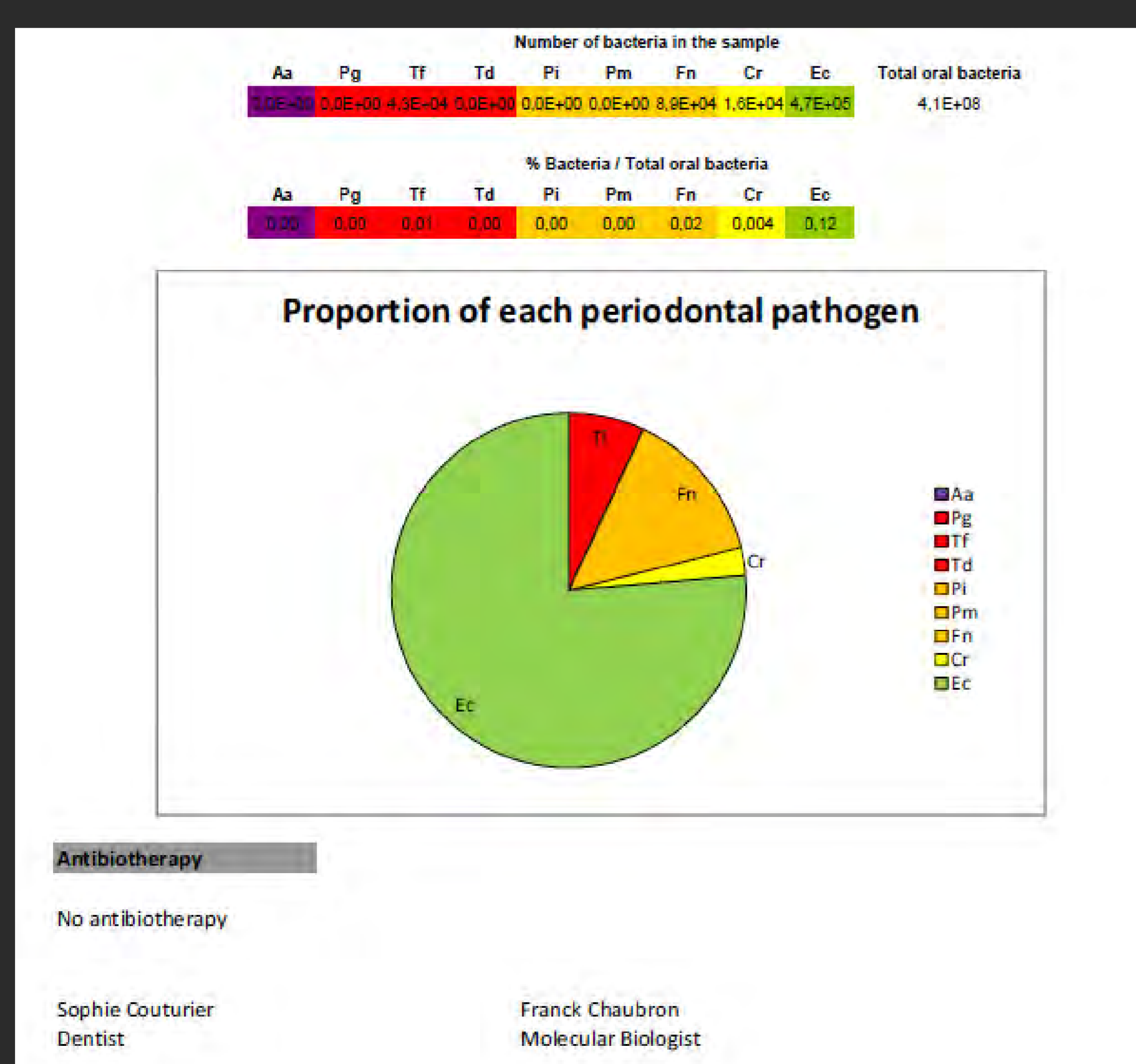


Fig.3 Results of RT-PCR test



Fig.1 Pyogenic granuloma adjacent to implants

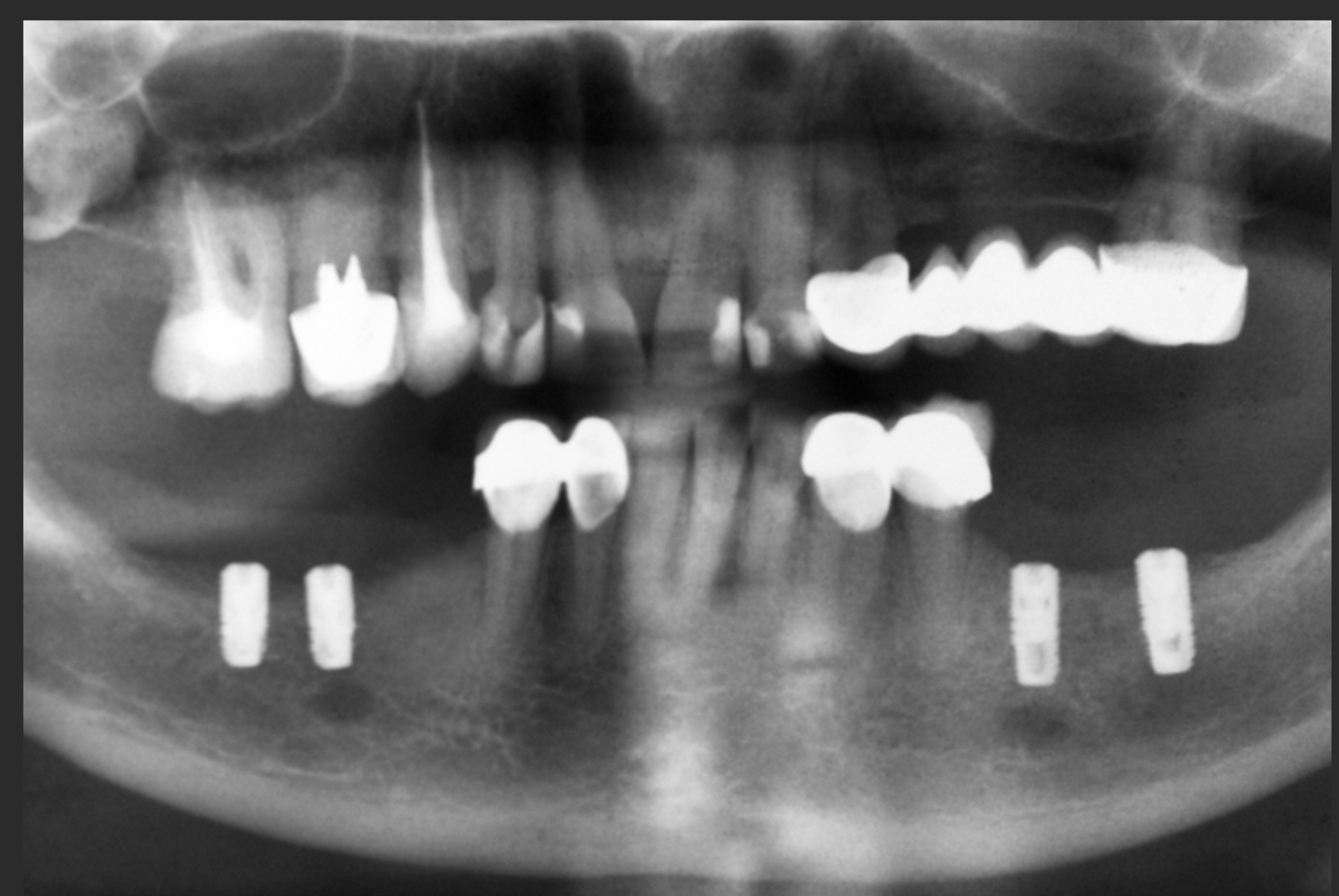


Fig.2 OPG with implants placed after vertical bone grafting

## CONCLUSIONS

The bacterial factor is believed to be the main cause of periimplantitis – the most common complication associated with dental implant treatment.

The bacterial test was aimed to confirm the hypothesis that the pyogenic granuloma around implants is of inflammatory nature. Neither the composition , nor the amount of detected bacteria did confirm this assumption.

1. Pyogenic granuloma should be considered in the differential diagnosis of pathological gingival lesions associated with dental implants.
2. Pyogenic granuloma when associated with implants is of reactive rather than inflammatory origin.

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