A Solitary Gingival Neurofibroma: A Case Report

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Background

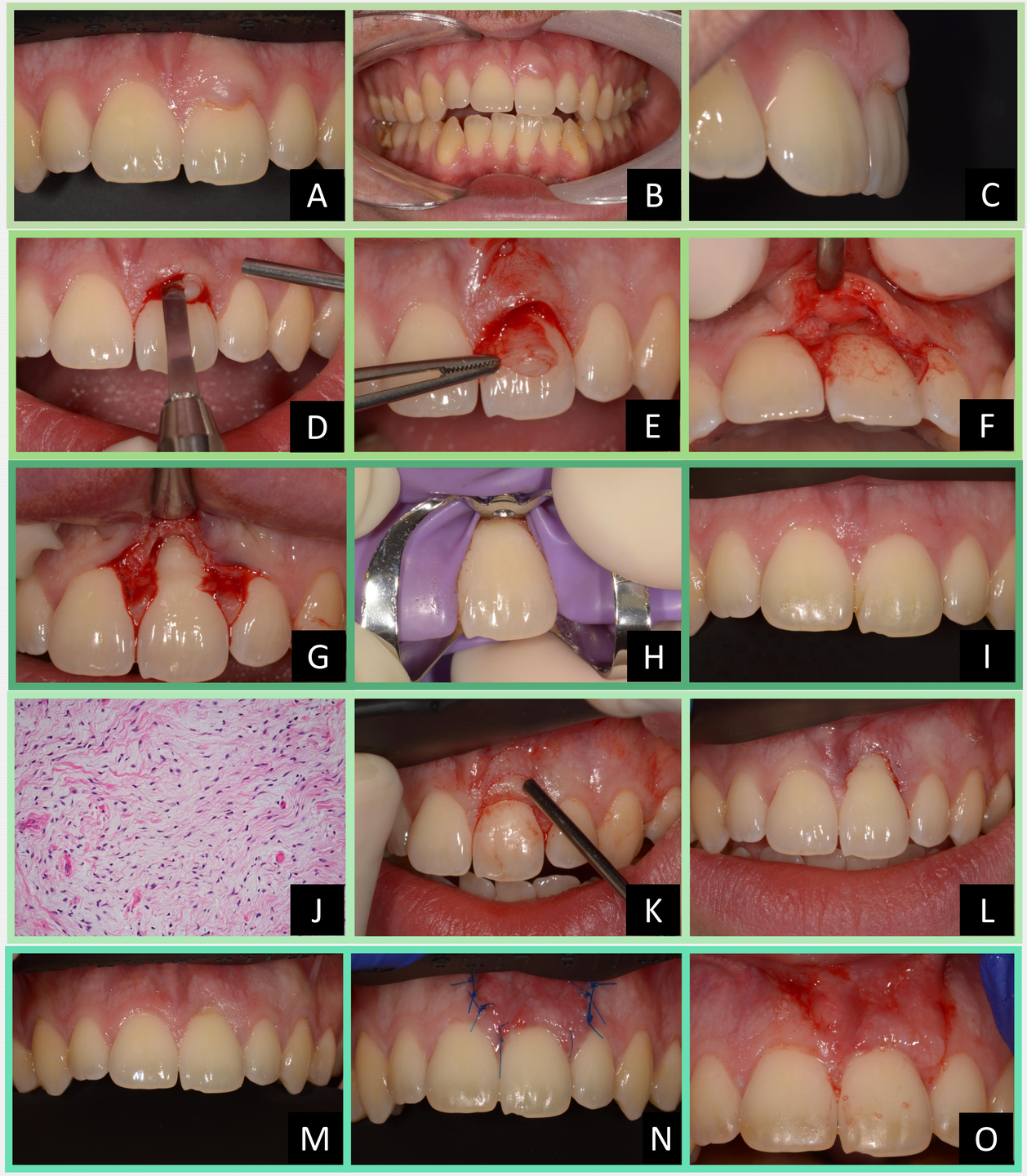
Neurofibromas are benign tumours of neural origin that are usually associated with Neurofibromatosis type 1 (NF1).[1] Solitary oral neurofibromas, particularly in the absence of NF1, are uncommon with an estimated prevalence of 6.5%.[1] The lips, tongue and oral mucosa are the most often affected sites in the oral cavity and the gingiva and palate are less frequently impacted.[1-3] Clinically, these lesions usually present as soft, sessile, asymptomatic, slow growing, submucosal tumours which vary in size with attachment loss that can mimic plaque induced periodontal disease.[1]

Case

A 32-year-old male presented to the University Dental Hospital of Manchester with a slow growing asymptomatic swelling associated with the upper left central incisor (UL1). The medical history was unremarkable with no history of trauma nor familial history of NF1.

Clinical examination revealed a well-defined sessile pink lesion extending from the mid-buccal aspect of the UL1 (Fig A-C), a shallow subgingival irregularity on the root surface (Fig G), a thick phenotype and satisfactory oral hygiene with no evidence of periodontal or dental disease. Radiographic examination was unremarkable and the provisional diagnosis was a fibrous epulis.

An excisional biopsy was performed using an internal bevel incision (Fig D-G), further clinically abnormal tissue was sharply dissected off the flap (Fig F&G), osseous curettage was performed and the cemento-enamel junction (CEJ) restored with composite to prevent the flap margin collapsing, reducing the risk of recession (Fig H). Histological examination revealed an incompletely excised neurofibroma, hence further surgery was planned (stage 1 further resection; stage 2 coronally advanced flap) to ensure complete excision and optimise aesthetics (Fig J-O).



Discussion & Conclusion

Intra-oral solitary neurofibromas in the absence of NF1 are uncommon and can mimic other prevalent oral pathoses. Their incidence of malignant transformation is 3-5%.[4,5] Rapid enlargement and pain can be indicators of malignant change and when this has occurred, these lesions have poor prognosis.[1] This highlights the importance of histopathological examination even in relatively innocuous scenarios.

If the described lesion had been an innocuous fibrous epulis, as provisionally hypothesised, further surgeries would not have been necessary. There is a scarcity of literature that discusses surgical approaches to biopsies in the aesthetic zone. Achieving both complete excision and optimal aesthetics can be very challenging however, this should be the aim when performing biopsies with aesthetic implications (assuming the provisional diagnosis allows for this). To accomplish this a combination of careful planning, knowledge and appropriate case selection is required. This case highlights how using an internal bevel incision can be utilised to gain access and remove a subepithelial lesion whilst achieving a satisfactory aesthetic outcome (Fig I). This single stage biopsy technique could have prevented the need for further surgeries and reduced morbidity, had the histopathological diagnosis been different.

In conclusion this case highlights the importance of histological analysis whilst demonstrating a sympathetic approach to managing gingival lesions in the aesthetic zone.

Key References

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