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Twenty-six patients (median age 17.5, range 13-32) underwent dental extraction while on active isotretinoin therapy. The median cumulative dose of isotretinoin to date of surgery was 4242 mg (range 1079-13859 mg).

Of 96 teeth extracted (D7210 = 7; D7220 = 18; D7230 = 46; D7240 = 25), only one patient (median age 19, OCP 300 mg cumulative dose of isotretinoin at the time of surgery) developed alveolar osteitis in one site (extractions site no. 17, D7240). There were no known smokers in this group and 3 out of the 4 total female patients were on OCP.

Abstract

Purpose: To assess the incidence of alveolar osteitis in patients undergoing dental extraction while on active and within 30 days of completing isotretinoin therapy.

Method: We retrospectively reviewed all patients using the Mayo Clinic EHR from 01/01/2000 to 02/22/2014 and identified those who had “Acne” or “isotretinoin” mentioned in their medical record within 180 days prior to the surgical procedure.

Results: Twenty-six patients (median age 17.5, range 13-32) underwent dental extraction while on active isotretinoin therapy. The median cumulative dose of isotretinoin to date of surgery was 4242 mg (range 1079-13859 mg).

Of 96 teeth extracted (D7210 = 7; D7220 = 18; D7230 = 46; D7240 = 25), only one patient (median age 19, OCP 300 mg cumulative dose of isotretinoin at the time of surgery) developed alveolar osteitis in one site (extractions site no. 17, D7240). There were no known smokers in this group and 3 out of the 4 total female patients were on OCP.

In twelve patients (median age 16.5, range 16-18) who completed isotretinoin therapy (average 10910 mg, range 6800-15880 mg) within 30 days of surgery, none developed alveolar osteitis. This group had three females (2 on OCP), one known male smoker, and a total of 49 dental extractions (D7220 = 3; D7230 = 26; D7240 = 20).

The incidence of alveolar osteitis in patients on active or recently completed isotretinoin therapy is 3.8% or 2.6%, respectively. These are within the range of previously published reports and suggest that isotretinoin does not confer additional risk of developing alveolar osteitis in patients undergoing dental extraction. The cumulative dose of isotretinoin at the time of surgery does not appear to be related to occurrence of alveolar osteitis.

DOES ACCUTANE (ISOTRETININO) THERAPY PUT PATIENTS AT RISK FOR DEVELOPING "DRY SOCKET" (ALVEOLAR OSTEITIS) AFTER DENTAL EXTRACTION?

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Figure 1: Patients who were on active isotretinoin therapy at the time of surgery

Figure 2: Patients who completed isotretinoin therapy within 30 days of surgery

Discussion

Acne vulgaris is a common skin disease that affects many patients who present to oral and maxillofacial surgery offices for treatment.

Isotretinoin is effective for treatment of severe resistant nodular acne but has serious side effects. Given the medications adverse side effect profile, patients who are on isotretinoin therapy may ask about their risk of developing ‘dry socket’ following surgical removal of teeth.

Isotretinoin’s effect on wound healing after surgical extraction of teeth is unknown. There is one published study conducted by dental professionals using surveys and phone contact. This study had limited details on diagnosis of AO type, surgery, and dosage within the patient population.

Our study represents the largest study done to date to address the question of isotretinoin patients developing AO following dental extraction. In our study, we aimed to control for confounding variables including skin type, oral contraceptive use, smoking, surgical trauma, and smoking and alcohol use as defined by the Mayo Clinic risk factor code, as defined by the Mayo Clinic risk factor code, as defined by the Mayo Clinic risk factor code, as defined by the Mayo Clinic risk factor code.

It is impossible to control for surgeon experience due to the involvement of 6 dental residency programs and surgical care over a 14-year time period.

The one patient’s AO occurred following removal of a completely bony impacted wisdom tooth in site no. 17. Based on available information in the EHR, it is difficult to know what risk, if any, isotretinoin played in the development of that patient’s AO.

Conclusions

• The incidence of alveolar osteitis in patients on active or recently completed isotretinoin therapy is 3.8% or 2.6%, respectively. These are within the range of previously published reports and suggest that isotretinoin does not confer additional risk of developing alveolar osteitis in patients undergoing dental extraction.

• The cumulative dose of isotretinoin at the time of surgery does not appear to be related to occurrence of alveolar osteitis.

• Further studies are needed.

References