RESEARCH SUMMARY

Oral contraceptive and complications in third molar surgery

Does oral contraceptive use affect the incidence of complications after extraction of a mandibular third molar?

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Objective
This study investigated whether oral contraceptive use affects the incidence of complications (pain, trismus, dry socket) in women undergoing removal of impacted mandibular third molars.

Patients and method
Two hundred and sixty seven women, aged 17 – 45 years, underwent removal of an impacted mandibular third molar. Eighty seven of the women were regular users of oral contraceptives. All patients were evaluated for postoperative pain, trismus and dry socket (localized alveolar osteitis).

Results
Mean trismus values (measured as maximum interincisal distance) were similar in the two groups of patients. Postoperative pain was significantly more frequent among women taking contraceptives, both on day 1 (30% of women taking contraceptives used analgesics, versus 11% of women not taking contraceptives, $p < 0.001$) and on day 5 (14% versus 5%, $p = 0.024$). Similarly, dry socket occurred more frequently among women taking contraceptives than among women not taking contraceptives (11% versus 4%, $p = 0.017$).

Conclusions
The results of this study support the view that oral contraceptive use favours the appearance of dry socket and postoperative pain after extraction, but has no effect on trismus.

IN BRIEF

- This study shows that women taking oral contraceptives are at increased risk for dry socket and postoperative pain after extraction of a third molar.
- The higher incidence of dry socket may be related to the fibrinolytic effect of oral contraceptives interfering with blood clotting.
- As regards the higher incidence of pain, it is possible that oral contraceptives lower the pain threshold for reasons yet unknown.

COMMENT

Despite clinicians' efforts to perform surgical procedures under strict aseptic conditions and with the minimal amount of surgical trauma, and despite efforts to be clear and concise about post-operative instructions, our patients continue to develop dry sockets. In many cases these can be attributed to surgical difficulties or to poor post-operative oral hygiene maintenance on the part of the patient. However there, quite rightly, continue to be investigations regarding other factors that may influence the incidence of dry sockets. The influence of the oral contraceptive pill is just one of these. This article is one in a long line of investigations on the influence of the oral contraceptive.

This study investigated the influence of the oral contraceptive on the presence of pain, trismus and development of localised alveolar osteitis following removal of mandibular third molar teeth. Two hundred and sixty seven patients were included in the study, 87 of whom had taken the oral contraceptive. Operator variation was eliminated by the same surgeon providing the surgical treatment under routine local anaesthesia. Following extractions, the patients received prophylactic antibiotics and anti-inflamatories. It is questionable whether the antibiotics would have provided any significant value as it is always considered appropriate that the patient should be given antibiotics prior to or at the time of surgery to ensure a high dose during the procedure.

The incidence of post-operative trismus did not vary significantly between the two groups. Only 6.4% developed dry socket. There is the suggestion that the risk of dry socket was three times greater in the contraceptive group, as was the description of post-operative pain and the need for post-operative analgesia.

The article highlights the increase in dry sockets in females during a period when oral contraceptives came into widespread use. The pharmacological activity of the drug, inducing increased fibrinolysis, has been linked with the development of dry sockets. The dry socket incidence in this study was similar to that reported in previous studies.

It is questionable whether the incidence of dry socket quoted in the article would alter either the patient's or the clinician's perception about the need to discontinue taking the contraceptive pill when undergoing minor oral surgery procedures.

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