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Local Haemostasis After Extensive Oral Surgery In Patients On Antiplatelet Agents: About A Series Of Clinical Cases

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Abstract: *Emerging countries, particularly Algeria, are witnessing an explosion in the prevalence of cardiovascular diseases, in particular, ischaemic heart disease for which antiplatelet agents (APT) (in mono or dual therapy) are the treatment of choice. Even if the problem of dental extractions in patients on APT was resolved, practitioners remained confronted with the problem of choosing the protocol to adopt for these patients in the event of extensive oral surgery. In this publication, we report the results of a series of cases from the experience of our department concerning the management of patients on APT for surgical procedures, without stopping treatment. 20 surgical procedures were performed, in 19 patients in mono and dual therapy with application of local hemostasis techniques. 3 cases of bleeding occurred intraoperatively and which were easily controlled by local hemostasis techniques and no postoperative bleeding occurred. Through this series of cases, we can conclude that the local haemostasis techniques used to prevent haemorrhage after dental extractions in patients on APT are also effective and sufficient in these patients in case of oral cavity surgery.*

KEYWORDS: Antiplatelet, Haemorrhage, Local hemostasis techniques, Oral surgery.

INTRODUCTION

Emerging countries, particularly Algeria, are witnessing an explosion in disease prevalence cardiovascular diseases, in particular, ischaemic heart disease [1] for which antiplatelet agents (APT) (in mono or dual therapy) are the treatment of choice in the prevention and management of thromboembolic events [2,3].

This increase in incidence increasingly involves a high number of patients undergoing APT treatments (single or dual therapy), consulting for oral procedures. While conservative care (dental and endodontic treatments) does not pose any problem for the practitioner, the fact remains that the most frequent and simplest bloody procedures are dental extractions, which have always posed the problem of hemorrhagic risk management. But after many publications, single or multiple dental extractions, not exceeding 2 teeth, could be done without altering the treatment with APT, which protects the patient from thromboembolic complications whose consequences can be fatal and hemostasis is then ensured by local procedures [4,5]. Even if the problem of dental extractions in patients on APT was resolved, practitioners remained confronted with the problem of choosing the protocol to adopt for these patients in the event of extensive oral surgery. For most of these procedures, practitioners resort to stopping APT by overestimating the risk of bleeding and underestimating the risk of thromboembolism.

In this publication, we report the results of a series of cases from the experience of our department concerning the management of patients on ATP (mono and dual therapy) for surgical procedures without interruption of treatment.

PATIENTS AND METHODS

Patients who were part of this series were recruited from the general consultation of Pathology and Oral Surgery. They are all on APT (mono and dual therapy), they have been referred, either by their treating doctors or by general dentists. These patients had oral pathology requiring extensive surgery (multiple extractions, disclusion of wisdom teeth, maxillary cysts, etc.). Before their management, these patients underwent an assessment of their cardiovascular status by the attending physician, the medical information was provided to us on a shuttle form, carefully completed.

After an interrogation, exo and endobuccal clinical examination, a radiological examination were carried out in these patients in order to establish a diagnosis and whether or not to indicate an oral surgery. Patients with a pathology whose treatment is bloody were informed of the protocol of their small surgeries, subsequently, they were programmed to avoid improvisation. In these patients, a standard biological assessment (blood count, platelet count, bleeding time) was systematically requested before the surgical procedure. On the day of the procedure, for most of these patients, preoperative antibiotic prophylaxis was not indicated because they were very often patients with ischemic heart disease. The surgical procedures were carried out after disinfection of the operating field under local anesthesia using an adrenaline solution in the absence of a contraindication, that is to say, in patients whose cardiovascular status was stable. After the surgical procedure, local hemostasis was ensured by local procedures, the principle of which is based on mixed

compression, that is, intrinsic (regenerated oxidized oxycellulose) and extrinsec. Hermetic sutures were performed which increased the compressive and therefore hemorrhagic effect. Then, the patients were released with interarch compression on the sutured sites and postoperative recommendations, namely:

- Motivation for oral hygiene with regular tooth brushing;
- The application of an exobuccal ice bladder to the surgical site for the first hours;
- Prohibit taking anti-inflammatory drugs;
- Avoid mouthwashes for the first 48 hours;
- Avoid hot food.

Postoperative antibiotic prophylaxis was prescribed, systematic checks were carried out on day 2, day 8 and day 15. A wire ablation took place on day 8. At each control, complications were identified, such as pain, edema, as well as hemorrhage, which was the primary endpoint. Postoperative antibiotic prophylaxis was discontinued as soon as the clinical condition of the wound was satisfactory. In the event of true haemorrhage, a new haemostasis assessment is requested and local haemostasis techniques have been resumed, which has made it possible to manage all the bleeding that has occurred without having to stop the APT.

RESULTS

In total, 20 surgical procedures were performed on 19 patients. These acts were divided into table

Table 1: Distribution of Oral Surgical Procedures Performed

Type of surgical procedure	Number of surgical procedure	Frequency (Percentage)(%)
Disinclusion of wisdom teeth	6	30
Canine disenrollment	2	10
Bone ridge regularization	3	15
alveolectomy	2	10
Vestibular deepening	2	10
Maxillary cyst	1	5
Lip Freinectomy	1	5
Dental implant positioning	1	5
Multiple extractions	1	5
Total	20	100

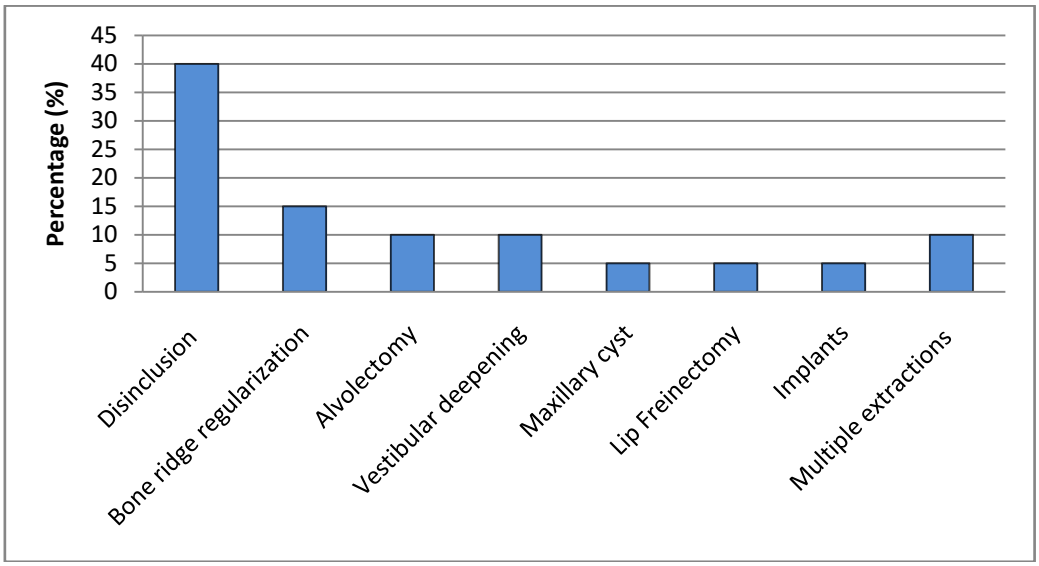

Figure 1: Oral surgery performed

Most of the procedures were performed on men (14 men and 5 women). With an average age of 43 years. All procedures were performed under adrenal anesthesia (1/100,000).

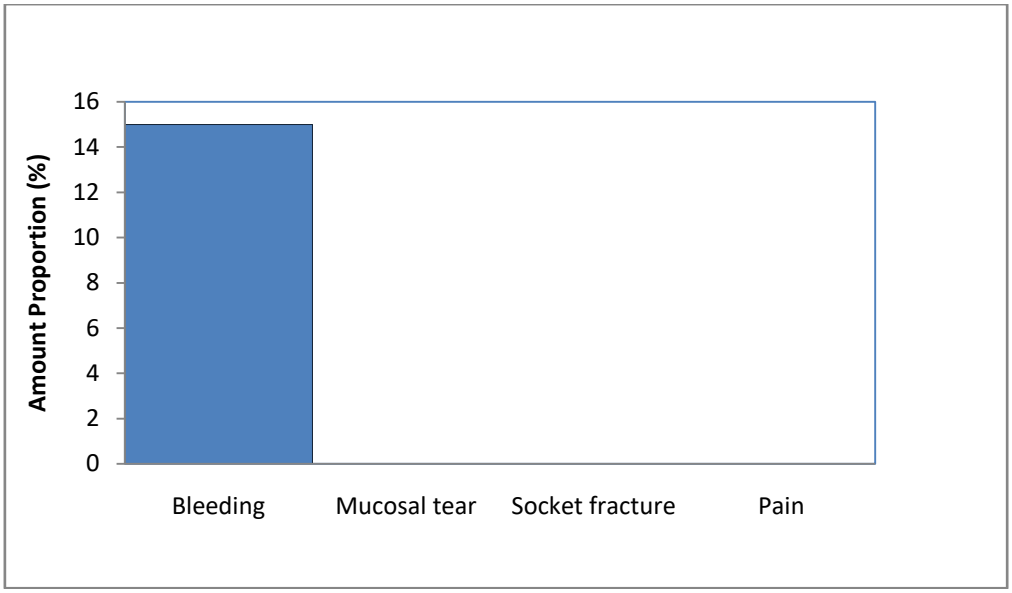

Figure 2: Frequency of complications occurring intraoperatively

In the postoperative period, no postoperative bleeding was reported in the 20 cases of procedures performed. On the other hand, other complications have occurred, such as edema, pain and bruising.

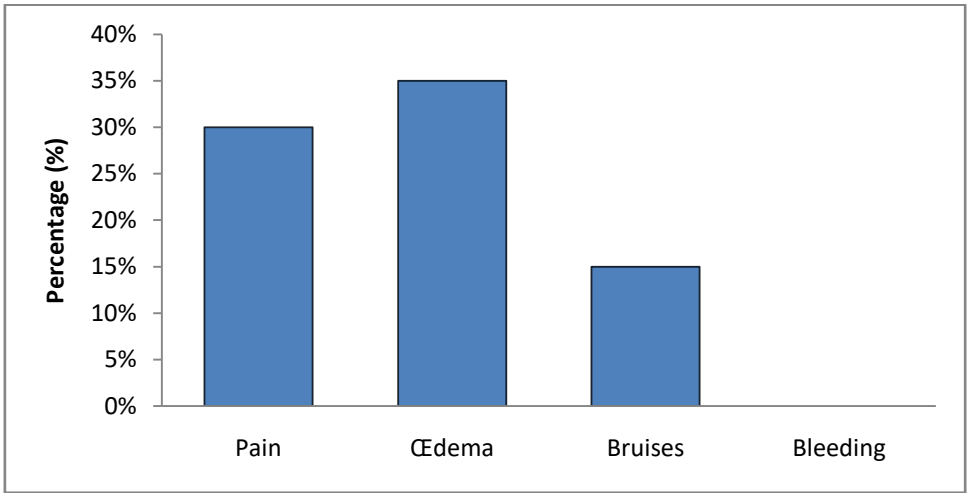

Figure 3: Frequency of postoperative complications

DISCUSSION

The majority of patients treated in this study have an average age of 43 years and have ischemic heart disease, this observation is not consistent with other studies in the literature because the prescription of antiplatelet drugs is often indicated in elderly subjects, followed for these pathologies. [6,7]

In the intraoperative period, 3 cases of haemorrhage have been reported in patients on dual APT therapy (Acetyl Salicylic Acid + Clopidogrel) who have undergone dental disinclusion. These haemorrhages are linked to a significant decay caused by the surgery (detachment of the flap, significant bone resection). These are externalized haemorrhages of a local nature that have been easily controlled by local haemostasis techniques. These techniques have been effective in preventing local bleeding for a long time. [8 - 10]

In the postoperative period, no hemorrhagic complications occurred, which further highlights the effectiveness of local hemostasis techniques in the prevention of postoperative hemorrhagic complications.

Indeed, the compressive effect of these means, placed in the per and postoperative phase, ensures the formation of a quality blood clot, which will first stop the bleeding and secondly, implement the alveolar and mucosal healing processes. [11 - 14]

In the event of postoperative haemorrhage, several authors indicate the use of anti-fibrinolytics such as tranexamic acid. [15-16]
On the other hand, in our case series study, some complications were reported such as pain, edema and bruising, these were managed by the prescription of antibiotics and analgesics.

CONCLUSION

Through this series of cases, we can conclude that the local haemostasis techniques used to prevent haemorrhage after dental extractions in patients on APT, are also effective and sufficient in these patients in case of oral cavity surgery.
This study on a series of cases is an experience of a service, a comparative study on a larger sample of patients, will certainly help to remove the controversy that continues to remain in the literature.

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