Invasive Dental Surgery is safe in Patients Receiving Thienopyridines Alone or in Combination with Aspirin without Discontinuation of Antiplatelet Therapy

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ABSTRACT

Background: Antiplatelet discontinuation is by far the principal cause of late thrombosis in patients treated by drug eluting stent (DES). Reasons for discontinuation include physician-driven discontinuation prior to dental surgery despite. Recommendations suggested recently to pursue dual antiplatelet therapy in patients with DES undergoing dental surgery despite the lack on any prospective studies.

Methods and Results: We evaluated the safety of dental surgery with an approriate haemostatic technique in 563 consecutive patients treated by thienopyridines alone (n=417) or in association with aspirin (n=146) without discontinuation of antiplatelet therapy. Only minor haemorrhagic adverse events occurred with limited reintervention in 13 patients (2.3%). Forty five patients (8%) required only application of tranexamic acid or glue adjunction.

Conclusions: Our data support that dental surgery with appropriate local haemostatic is safe in patients receiving thienopyridines alone or in combination with aspirin without discontinuation of antiplatelet therapy thus avoiding the disastrous complications of stent thrombosis.

Aspirin and clopidogrel prevent stent thrombosis while drug eluting stents (DES) are widely used to treat coronary artery disease (1). Late thrombosis has been reported in patients previously treated by DES and is associated with 50% of all occurrences with death or myocardial infarction (2-4). Most importantly, antiplatelet discontinuation is by far the principal cause of late thrombosis (2-4). Along with patient decision, reasons for discontinuation include physician-driven discontinuation prior to surgery – including dental procedures – by lack of knowledge on the cardiovascular risks. Interventional cardiologists should be discouraged to implant DES in patients for whom secondary surgery is anticipated, or unable to maintain antiplatelet therapy. Recommendations suggested to pursue dual antiplatelet therapy despite the lack of any prospective studies in patients with DES undergoing dental surgery (5). Information regarding these guidelines within general practitioners and odontologists and its lack thereof appears as the main reason for such a misinterpretation of the risk/benefit ratio. Hence, we caution the medical and surgical community of the major risks associated with interruption of antiplatelet therapies in this patient population.

We report the results of a prospective study evaluating the safety of dental surgery with an haemostatic technique in 563 consecutive patients (65 years old, sex ratio 3.2/1) treated by thienopyridines alone (n=417) or in association with aspirin (n=146) without discontinuation of antiplatelet therapy. Briefly, isolated dental extractions on both dental arches were performed simultaneously on consecutive quadrants or on 2 opposite quadrants. Multiple extractions were designed to avoid extraction of more than 3 teeth within the same quadrant. Local haemostasis was achieved in 4 consecutive steps. First, a filling of the dental socket was performed by insertion of a Surgicel® dressing or balls of Resorcel® with or without collagen dressing packed at the bottom of the socket with oxycellulose dressing. Second, “X” edges sutures were made to maintain the haemostatic material within the socket. Third, oxycellulose

dressing (Surgicel®) was cut to cover the surgical wound beyond its edges. Finally, Cyanoacrylate Glue bonding (Histoacryl®) was applied.

Only minor haemorrhagic adverse events occurred with limited reintervention in 13 patients (2.3%). Forty five patients (8%) required only application of tranexamic acid or glue adjunction.

Our data support that dental surgery with appropriate local haemostatic is safe in patients receiving thienopyridines alone or in combination with aspirin without discontinuation of antiplatelet therapy thus avoiding the disastrous complications of stent thrombosis.

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