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RESEARCH ARTICLE **OPEN ACCESS**

DIFFICULTIES ENCOUNTERED BY PATIENTS UNDER ANTIPLATELET/ANTICOAGULANTS COMPARED WITH PATIENTS WITHOUT ANY CO-MORBIDITIES [ASA I] REPORTING FOR DENTAL EXTRACTION AND OTHER MINOR ORAL SURGICAL PROCEDURES

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ABSTRACT

Background: A lot of patients report to OMFS OPD for dental extraction and other minor surgical procedures with co-morbidities, of which patients under anti-thrombotic drugs form a major number. Even though post-operative bleeding and the blood parameters leading to it had been investigated, there is a lacuna in the literature regarding the difficulties faced by these patients for getting their treatment done. **Method:** A cross sectional comparative study was conducted between two groups who reported for minor oral surgical procedures comparing number of visits, number of days of hospital stay, number of bystanders, between patients under antithrombotic medication (250 patients) with ASA I patients (250 patients). **Results:** Our study showed that patients under anti-thrombotic drugs required anything from 3 to 9 visits while ASA I patients only needed only a single visit. 19 patients required hospitalisation for heparinisation and required 3-5 days of hospital stay. Number bystanders for patients under anti-thrombotic drugs ranged from 2-3 which added to the number visits lead to 6-27 days of loss of manpower days. **Conclusion:** Number of visits and number of bystanders needed to get a minor oral surgical procedure done by a patient on antithrombotic medication puts him/her in difficulties and causes loss of manpower days. Which in a country like India is a matter of concern. Hence a definite protocol for the management of these patients is required to ease the difficulty and burden.

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INTRODUCTION

Patients reporting for extraction of teeth and for other oral surgical procedures may be presenting with different co-morbidities. They may be under a range of medications for the same which may influence the dental treatment. One such group is those on antithrombotic drugs. For these patients dental treatment may be tedious requiring repeated visits for getting clearance for the treatment, risk of bleeding, need for hospital admission and emergency care. There is lack of data regarding the number of visits and number of speciality consultations required for getting their treatment done. There is also lack of consensus by the physicians and dentists regarding the need to stop antiplatelet / anticoagulant therapy for dental extraction or minor oral surgical procedures. There is lack of data in our institution regarding the frequency of such patients reporting for dental treatment and difficulty they face in terms of repeated dental visits, hospital admissions, postoperative bleeding. Hence in this study we aimed at comparing the difficulties of patients on antithrombotic drugs with ASA I patients for getting a minor oral surgical procedure done.

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METHODOLOGY

This cross-sectional comparative study was conducted in patients reporting to the Department of Oral and Maxillofacial Surgery at Govt. Dental College, Calicut, Kerala for dental extraction and minor oral surgical procedures over a period of nine months after ethical clearance from the institutional ethics committee. For the purpose of the study following parameters were selected to define difficulty faced by the patients: 1. Number of visits to the OPD. 2. Number of visits to the specialists OPD 3 Number of days of hospital stay. 4. Number of accompanying bystanders.

***Sample selection*:** Patients who were under anticoagulant / antiplatelet therapy reported to the department of Oral and Maxillofacial Surgery for minor oral surgical procedures were selected as group I andnormal healthy patients [ASA I] who reported to the department of Oral and Maxillofacial Surgery for minor oral surgical procedures were selected randomly as group II. All those who refused to give consent and patients with other co-morbidities were excluded. No additional investigation was done other than routinely required for the surgical procedure.

A pilot study was conducted for one month to assess the number of patients under antiplatelet/anticoagulant reporting for dental extraction and other minor surgical procedures Numbers of visits to the department and to other medical specialists were noted down. For those who required admission, the reason for the same, number of days of hospital stay and the number of bystanders accompanying the patient were also recorded. Number of bystanders of day care patients was also recorded. Data collection was done after the completion of the treatment or at the time of discharge for the patients who were admitted. Statistical analysis was be done by SPSS software. Qualitative data and quantitative data were analysed by Chi square test and Student T Test respectively.

RESULTS

Total no of visits to dental op and other medical speciality: In Group II all the patients required only a single visit for the completion of the treatment. In Group I 71 patients required 3 visits (two visits to dental OP and one visit to the concerned specialist). Rest of the patients required three visits to the dental OP but the number of visits to the concerned speciality varied. Twelve patients required 4 visits, 6 patients required 5 visits, while one patient required 6 visits to the concerned speciality. The difference between the two groups was statistically significant (Table I)

Hospital stay: Among the 250 patients in the Group I, 19 patients required admission in the hospital. All these patients were under anticoagulant therapy and required heparinisation before the oral surgical procedure. Among these 19 patients one patient required five days of hospital stay for the treatment to be done. 6 patients required four days and the rest 12 patients required three days of admission in the hospital. Among the Group II none required admission in the hospital**.** This shows a statistically significant difference (Table II)

Number of bystanders: Among the 250 patients in Group II, 200 patients had only one bystander, 47 patients had two bystanders and three patients had three bystanders on the day of the treatment. In the Group I, 147 patients had one bystander, 91 patients had two bystanders and 12 patients had 3 bystanders (Legend 1)

Percentage distribution of specific medication: Of the 250 patients from the study group majority of the patients (57%) were under antiplatelet therapy, followed by 25% patients under anticoagulant therapy and 18% under dual antiplatelet therapy

DISCUSSION

Present system in the institution required consultation from the concerned specialist for decision regarding interruption or continuation of the therapy while planning minor surgical procedures for patients under anti-platelets /anti-coagulants. Hence, they might require extra number of visits to the dental OPD and concerned specialist for the completion of their treatment. Previous studies by Rossini and colleagues[1], Buhatem et al[2] focused on the need for continuation or discontinuation of therapy before minor surgical procedures and the risks associated with each management strategy and concluded that there is no need to stop either dual antiplatelet therapy or anticoagulant medications before dental extractions. Being unexplored by previous literatures, this study focused on the analysis of the difficulties of such patients. As previously described, in this study difficulty is defined as increased number of visits to dental OPD and concerned speciality, hospital stay and number of bystanders.

In group I all patients were under antiplatelet /anticoagulant therapy for prophylactic or therapeutic purposes. 57% were under antiplatelet therapy, 25% were under anticoagulant therapy and 18% were noted to be under dual antiplatelet therapy, which includes a combination of two antiplatelet drugs. None of the patients were under combined antiplatelet and anticoagulant therapy. Studies by Denise E. van Diermen et al. (2013) Ozge Doganay et al. (2018) Gautam A. Madan et al. (2014) Theodoros Lillis et al. (2011) has suggested that interruption of antithrombotic therapy was not mandatory, due to insignificant risk of postoperative bleeding with or without local hemostatic measures. A survey conducted by Ravindran Chinnaswami et al revealed that dentists tend to over-estimate the bleeding risk, thus being cautious in their treatment approach. They concluded that, Oral surgeons should weigh the risk of thromboembolic events and the bleeding risk from the dental procedure in consultation with the primary physician of the patient (who has prescribed the OAM) before considering the proposed management (Chinnaswami, 2017).

160 patients in group I was advised interruption of therapy and 19 patients required heparin bridging (Table I). Remaining patients were not recommended to withdraw antithrombotic medication. This data shows that, in this study the commonly recommended opinion being interruption of the therapy five days prior to the minor oral surgical procedure (64%). A study by Brent B. Ward et al stated that, lack of uniformity exists regarding Warfarin therapy and dentoalveolar surgery suggesting a need for prospective trial to elucidate stronger management guidelines (Ward, 2007). Table III shows that the decision on interruption of medication was not consistent with the type of antithrombotic drug consumed. Rather the decision varied with each surgeon and the concerned specialist.

Table 1. Comparison of number of visits to Dental OP and concerned specialities between the cases and control

		NO OF VISITS AT THE CONCLUSION OF TREATMENT												Total	P value
OPD visited		D	C	D	C	D	C	D	C	D	C	D	C		
No. of visits		1	0	2	1	3	1	3	4	3	5	3	6		
Total (D+C)		1		3		4		7		8		9			
Group	I	0		71		160		12		6		1		250	<0.0001
	II	250		0		0		0		0		0		250	
Total		250		71		160		12		6		1		500	

D – Dental OP C – Concerned speciality

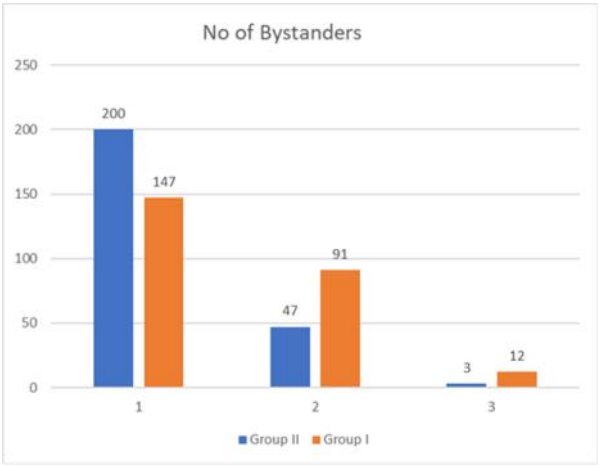
Number of Visits: The difference in number of visits between Group I and Group II was found to be significant. With almost all the patients of group I (250 patients) showed significantly increased number of visits for the completion of a minor surgical procedure (3,4,7,8,9 visits). The increased number of visits is attributed to the need for getting clearance from the physician. Patients in Group II required only a single visit for completion of the treatment. For patients in whom interruption of medication was not suggested, the surgical procedure was performed during the second dental visit. The surgical procedure was performed during the third dental visit, for those patients requiring interruption of the medication being taken. All these patients required at least one visit to the concerned speciality.

Table II. Comparison of number of patients who had required hospital stay between the cases and controls

Group	HOSPITAL STAY		Total	P value
	No	Yes		
Group I	231	19	250	<0.0001
Group II	250	0	250	
Total	481	19	500	

Table III

Medication	Number of patients under specific treatment advice		
	Continue medication	Bridging	Interruption of therapy
Antiplatelet	54	87	0
Anticoagulant	5	37	19
Dual antiplatelet	9	36	0



Hospital admission: This was only applicable to Group I. The increase in number of visits in patients with more than 4 visits was attributed to the days of hospital admission and need for heparinisation. The number of days of hospital admission varied from 3-5 days.

Number of bystanders: Legend 1 shows that majority of the group I Patients were found to be accompanied by a single bystander during their visit. Patients in Group II were accompanied by one to three bystanders during each visit.

Loss of manpower days: Table I and table II shows that there is a significant increase in number of visits, and number of days of hospital admission in Group I. Patients in group II required only a single visit compared to Group I. The importance of number of visits and number of bystanders' present can be viewed from socio-economic aspect. When a healthy patient comes with one bystander, we can consider that two manpower days are lost. When the number of visits and the number of bystanders increased, the total number of manpower days lost had correspondingly increased. A study by Luft et al[8] comments that manpower loss is the result of the effects of poor health on all the components of earnings: labour force participation, weeks worked per year, hours worked per week, and earnings per hour.

Our study shows that manpower loss is attributed to the inability to participate in the labour force. Further, a study by Janice has showed that absence from work due to medical and dental appointments accounted for six days of work lost for an average person. This accounts for 3.5% of the total hours lost per year. Similar studies by Paul Fenn et al. (2016) has showed that absence due to sickness and medical visits had led to significant short term absence from work. On assessing the work days lost due to dental treatments, Susane et al showed that 26.4% of the study sample reported an episode of work loss due to dental appointment. One of the most important predictors of having work loss were high number of dental visits[10]. That work loss is generally regarded as a serious outcome in severely disabling medical conditions. In dentistry, the potential impact of work loss, while small on an individual level, could be quite large on a societal level resulting in thousands of work loss days annually.

Summary

The existing data shows that, the patients on antithrombotic drugs requiring minor oral surgical procedures needed multiple visits to the dentist and their concerned physician, as compared to the ASA I patients. The number of manpower days lost to get an oral minor surgical procedure done in patients with antithrombotic medication, will have a potential impact on the societal level. This study signals the need for further studies focusing on proposing evidence-based guidelines for management of these patients, which might ease the difficulties of these patients at an individual and societal level

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