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RESEARCH ARTICLE

AWARENESS AND PRACTICE OF THROMBOPROPHYLAXIS AMONG DIFFERENT HEALTH CARE PERSONALS AT LIAQUAT UNIVERSITY HOSPITAL

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ABSTRACT

Objective: To determine the awareness and practice of thromboprophylaxis among different health care personals working at Liaquat University Hospital (LUH).

Methodology: This descriptive study was conducted at Liaquat University Hospital Hyderabad/Jamshoro. All the willing health care providers/professionals practicing individual or under supervision of seniors were included in the study. A questionnaire is used to explore the range of knowledge and practices regarding thromboprophylaxis. The results were analyzed using SPSS version 20. Frequency and percentages were calculated for different variables.

Results: During the study period, 250 health care personals working in LUH at different positions in surgery and allied i.e. 26 nurses, 68 house officers, 81 postgraduates of different courses like masters/FCPS and 75 consultants participated in the study. The majority of health care personals evaluate their patients for thromboprophylaxis and almost the same number give thromboprophylaxis to their patients, consultants are at top priority followed by postgraduates, then house officer and in last nurses in evaluation then giving thromboprophylaxis. As the majority of the participants give thromboprophylaxis so the different modalities were also assessed. Early mobilization is the first choice utilized by all participants, followed by Heparin and in last stockings was preferred.

Conclusion: Although the majority of health care personals were using thromboprophylaxis, however, there are not any proper guidelines to be followed.

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INTRODUCTION

Venous thromboembolism is a common and possibly preventable disease in hospitalized patients. Thromboprophylaxis for thromboembolic disease which tend to occur due to changes in blood stasis, increased coagulability of blood and damage to vessel wall as defined by Virchow's. The risk of thromboembolic disease rise in certain surgical and medical conditions. Several studies conclude that many hospitalized patients do not receive appropriate prophylaxis, remains at risk of venous thromboembolism (VTE) and its consequences like pulmonary embolism, recurrent DVT, post-thrombotic syndrome (Henke and Pannucci, 2010; Pandey *et al.*, 2009). Therefore it is strongly recommended that all inpatients for risk should be assessed routinely and must receive thromboprophylaxis as a part of quality care measure. Prophylaxis strategy includes early mobilization, compression stockings, intermittent pneumatic compression and venous foot

pumps. It may also be given by certain drugs like low-dose unfractionated heparin (LDUH), low-molecular-weight heparin (LMWH), oral warfarin. The pentasaccharide, factor Xa inhibitor, fondaparinux is a new alternative for VTE prophylaxis and treatment still not used in our setup. DVT prevalence and mortality rate is also high in Asian countries especially in the developing one like us. In our setup due to lack of organized protocol to such assessment of risk factors appropriate thromboprophylaxis will be ignored or under practiced. As fewer studies were conducted in Pakistan on DVT and its prophylaxis especially in our institute which is the biggest tertiary care hospital of Sindh province no such study is conducted in best of knowledge. Hence this study is designed to assess the awareness of healthcare professionals regarding prevalence importance of thromboprophylaxis and their practices for its implementation at LUH (Nutescu, 2007; Wasim Mirza *et al.*, 2005).

MATERIALS AND METHODS

This descriptive study was conducted at Liaquat University Hospital Hyderabad/ Jamshoro from 1st- to 30th November

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2014. All the willing health care providers/professionals practicing individual or under supervision of seniors were included in the study. A questionnaire is used to explore the range of knowledge and practice regarding thromboprophylaxis. The content of questionnaire was explained. Questionnaire had 02 parts; first part contains personal bio data and second part contains questions regarding knowledge and practice. The questionnaire was very simple and short so be filled easily within short time. The results were analyzed using SPSS version 20. Frequency and percentages were calculated for different variables.

(26/250) willingly contributed in this study. Among 81 postgraduate students 72(89%) had evaluate while 09(11%) do not, 67(82%) give thromboprophylaxis while 15(18%) never does and about 40(49%) thinks it is harmful and whereas 41(51%) thinks it is not harmful. Consultants (75) as they are superior among all participants 64 (85%) had evaluate while only 11(15%) do not, probably due to their experience they are used to recommending in routine, 67(89%) give thromboprophylaxis while small number of them thinks it unnecessary 08(11%) and about 27(36%) thinks it is harmful and whereas majority was well oriented with the benefits that

Table 1. Analysis of response given by different health care personal

Questions	Response	Nurses n=26	House officer n=68	Postgraduate students n=81	Consultants n=75
Do you evaluate patient for thromboprophylaxis?	Yes	18(69%)	51(75%)	72(89%)	64(85%)
	No	08(31%)	17(25%)	09(11%)	11(15%)
Do you give thromboprophylaxis?	Yes	18(69%)	51(75%)	67(82%)	67(89%)
	No	08(31%)	17(25%)	15(18%)	08(11%)
Do you think giving thromboprophylaxis harmful?	Yes	11(42%)	28(41%)	40(49%)	27(36%)
	No	15(58%)	40(59%)	41(51%)	48(64%)

Table 2. Modes of Thromboprophylaxis given

	Early Mobilization	Stockings	Heparin
	Yes/No	Yes/No	Yes/No
Nurses(26)	14(54%)/12(46%)	06(23%)/20(77%)	10(38%)/16(62%)
House officers(68)	39(57%)/29(43%)	40(59%)/28(41%)	32(47%)/36(53%)
Post Graduates(81)	66(81%)/15(19%)	43(53%)/38(47%)	62(76%)/19(24%)
Consultants(75)	70(93%)/05(07%)	43(57%)/32(43%)	50(67%)/25(33%)

RESULTS

During study period 250 health care personals working in LUH at different positions in surgery and allied i.e. 26 nurses, 68 house officers, 81 postgraduates of different courses like masters/ FCPS and 75 consultants participated in the study. Majority of health care personals evaluate their patients for thromboprophylaxis and almost the same number give thromboprophylaxis to their patients. Despite of giving or not giving just evaluating the patients lesser amount of participants thought that thromboprophylaxis is harmful. Frequency and percentage of all responses is shown in Table 1. As majority of the participants give thromboprophylaxis so the different modalities were also assessed. Early mobilization is first choice utilized by all participants, followed by Heparin and in last stockings was preferred. A detail of utilization of different modes for thromboprophylaxis is shown in Table 2.

DISCUSSION

Thromboprophylaxis is highly effective, safe and economical in reducing morbidity and mortality in patients at risk. It is noted that many patients who are at risk, later developed VTE after discharge from hospital, failed to receive appropriate thromboprophylaxis during their stay at hospital. In our setup like other developing countries either no standard guide lines for thromboprophylaxis available or their compliance remains neglected/ improperly utilized which otherwise improves thromboprophylaxis prescription rate (Khan and Zafar, 2013; Mirza et al., 2005; Muhammad and Muhammad, 2011). The results of the study may help us in assessing the magnitude of awareness and practice of thromboprophylaxis in health care personals at LUH working at different position. Majority of the participant are postgraduate students (81/250), then consultants (75/250), followed by (68/250) house officers and in last nurses

it's not 48(64%) harmful. House officers who are supposed to be back bone of the unit as they are fresh graduates having good academic knowledge and having keen desire to learn and apply that knowledge more. They remain in contact with patient more than seniors. In this study 68 house officers participate out of which 51(75%) has evaluate while 17(25%) do not, 51(75%) give thromboprophylaxis while 17(25%) never does and about 28(41%) thinks it is harmful and whereas 40(59%) thinks it is not harmful. The short falls in practices of thromboprophylaxis is because they are still in learning phase. In last after house officers the nurses are the health care personals remains more in patient contact, nowadays patient prefer the hospital providing better post-operative nursing care. They must be equally trained to assess and give appropriate thromboprophylaxis. Almost similar results were observed among 18(69%) has evaluate while 08(31%) do not, 18(69%) give thromboprophylaxis while 08(31%) never does and about 11(42%) thinks it is harmful and whereas 15(58%) thinks it is not harmful when compared with others. The reason for not evaluating and giving thromboprophylaxis is probably the unawareness, considering unnecessary as the complication like DVT and PE are uncommon in our setup which is not true (Haas et al., 1992). Regarding awareness and prescribing thromboprophylaxis our results are more or less similar with the study conducted by Bhatti AM and AhsinS in Abbottabad (Bhatti et al., 2012).

Results of the study conclude that majority of health care personals are in opinion of giving thromboprophylaxis through different modalities. Postgraduate student mobilize their patient earlier in 66(81%) then they use heparin 62(76%) and in last they apply stocking in 43(53%) cases. Consultants tend to prefer early mobilizations 70(93%) as very cheap and easy approach in prophylaxis, next option is heparin used in 50(67%) and in last they apply stocking in

43(57%) cases. Similar methods with same preference were followed by house officers and nurses. Regarding early mobilization house officer 39(57%), heparin 32(47%) and stocking in 40(59%) while nurses 14 (54%), heparin 0(38%) and stocking in 06(23%) cases. Findings regarding prophylaxis modalities in our study are not consistent with the findings of Zahirkhan who observes heparin as first choice versus early mobilization and stocking. Difference in results may be according to risk assessment. The results of this study reveal that the knowledge of health care personals regarding thromboprophylaxis is not up to mark. Their awareness is not reflected in their practice of prescribing adequate prophylaxis (Khan *et al.*, 2012; Wiseman and Harrison, 2010). If proper thromboprophylactic is commenced at proper time, marked reduction in occurrence of VTE is seen. Regime of choice is selected on knowledge of different modalities according to risk factors with their pros and cons. Failure of thromboprophylaxis in patients at risk in hospital results in development of VTE after discharge from hospital confirmed by several national and international studies (Akbar *et al.*, 2006; Bilal, 2001; Ahmad, 2005).

Conclusion

In our culture it is common practice to discharge patient from hospital early or left against medical advice (LAMA), ill patients but not in hospital will have significant risk of thrombosis and embolism. Considering prophylaxis in such circumstances may be worthwhile. Thromboprophylaxis can be enhanced by emphasizing educational programs/trainings for all health care personals accordingly. Thromboprophylaxis practice at our institutions lacks national and international guidelines to be followed as protocol in order to improve.

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Conflicts of interest

Authors declare no any conflict of interest.

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