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THROMBOPROPHYLAXIS IN SURGICAL PATIENTS

1. **MUHAMMAD RAFIQUE MEMON** FCPS
2. **SAMINA RAFIQ MEMON** (FCPS)
3. **SHAKEEL AHMED ABBASI,** MS(Ortho)
4. **SAIMA ARSHAD** FCPS
5. **SYED QARIB ABBAS SHAH,** MCPS, MS

1. ***Assistant Professor Surgery*** GHULAM MUHAMMAD MAHER MEDICAL COLLEGE HOSPITAL SUKKUR.
2. ***Registrar,*** GHULAM MUHAMMAD MAHER MEDICAL COLLEGE HOSPITAL AT. KHAIRPUR.
3. ***Assistant Professor Orthopaedic*** **Surgery** GHULAM MUHAMMAD MAHER MEDICAL COLLEGE HOSPITAL SUKKUR.
4. ***Consaltant Surgeon,*** GHULAM MUHAMMAD MAHER MEDICAL COLLEGE HOSPITAL SUKKUR.
5. ***Professor Of Surgery,*** GHULAM MUHAMMAD MAHER MEDICAL COLLEGE HOSPITAL SUKKUR.

Correspondence:
DR.M.RAFIQ MEMON
HOUSE NO-B-1703,MEMON MUHALLA ROHRI,
DIST.SUKKUR.

ABSTRACT:

OBJECTIVE*: To audit surgeons' practice of providing prophylaxis for venous thromboembolism (VTE) in patients admitted in surgical department for emergency and elective operations, and to determine the consequences of lack of prophylaxis.*
DESIGN*: Case-control comparative study.*
PLACE AND DURATION OF STUDY*: All patients admitted in surgical department at Ghulam Muhammad Mehar Medical College Hospital Sukkur who stayed longer than 6 days were studied between Jan 2008 to Dec 2009.*
PATIENTS AND METHODS*: Demographic data as well as risk factors for VTE were identified for all patients who were divided in two groups. Patients who received prophylaxis (Group I) and those who did not (Group II) were both followed up. Type of prophylaxis and any complications were documented. Duplex ultrasound of the lower limbs was done on all patients in both groups and the outcome for all patients were documented.*
RESULTS*: Two hundred and fifty patients were studied. Ninety seven (38.8 %) patients (group I) received prophylaxis for VTE, while 153 (61.2%) patients (group II) did not receive prophylaxis. Duplex sonography did not reveal deep venous thrombosis (DVT) in any patient of the two groups in hospital and up to one month after discharge. The mortality was 1.03% in group I and 5.23% in group II.*
CONCLUSION*: The low death rate due to DVT and P.E in surgical patients after thromboprophylaxis suggests a tendency towards improved perioperative thromboembolic risk management. So there should be a definite protocol of thromboprophylaxis for high risk surgical patients operated electively or in emergency.*

KEY WORDS: Venous thromboembolism, Thromboprophylaxis, Surgical patients.

INTRODUCTION:

Venous thromboembolic (VTE) disease is a significant cause of morbidity & mortality in hospitalized patients. Postmortem data suggest that approximately 10% of deaths that occur in hospitals are due to pulmonary embolism (P.E).[1] The overall incidence of pulmonary embolism following general surgery ranges from 0.1 to 9%, or even higher in patients at greater risk.[2-4] The thromboembolism risk associated with surgery varies according to the procedure being performed, with some surgical procedures carrying no or little risk and others carrying a very high risk. Thrombo-prophylaxis is effective but is associated with expense, inconvenience and adverse effects. So it is necessary to make a balanced judgment for each patient. Three key aspects must be considered: (1) Patient risk, (2) Procedure risk, and (3) Prophylactic method-efficacy, safety, cost and convenience. When considering prophylaxis for surgical patients, the first step is to summate the risk to the patient and the risk of surgical procedures.[5] The next step is to balance the efficacy of a prophylactic method against safety, cost and convenience. Prophylactic methods can be broadly divided into mechanical and pharmacological methods; each has relative advantages and disadvantages. The institution of routine DVT prophylaxis including early ambulation, the use of mechanical compression devices, and administration of anticoagulation therapy has resulted in a marked decrease in the incidence of pulmonary embolism, recently documented by a prospective observational study of patients undergoing a variety of different oncologic surgeries.[6] Mortality from pulmonary embolism at 3-month follow-up has been observed to be 15%, a surprisingly high rate considering current aggressive treatment protocols.[7] In addition to the acute morbidity and mortality of PE, chronic pulmonary hypertension arising in the years following PE has been noted.[8]

VTE is largely preventable and prophylaxis with low-molecular weight heparin (LMWH)