

Venous Thromboembolism Sticker For Postpartum Thromboprophylaxis: Single Unit Experience.

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Introduction and Objectives

Risk stratification and thromboprophylaxis prevent venous thromboembolism (VTE) associated maternal deaths. Identifying women who require postpartum pharmacological thromboprophylaxis and administering the correct dose and duration of low molecular weight heparin (LMWH) is crucial in preventing postpartum VTE. The RCOG guideline stratifies women at risk for thromboembolism based on pre-existing, transient and obstetric risk factors and recommends thromboprophylaxis based on risk scores. This audit evaluated compliance with the RCOG guideline on postpartum risk stratification and thromboprophylaxis in a tertiary hospital in Sri Lanka.

Methods

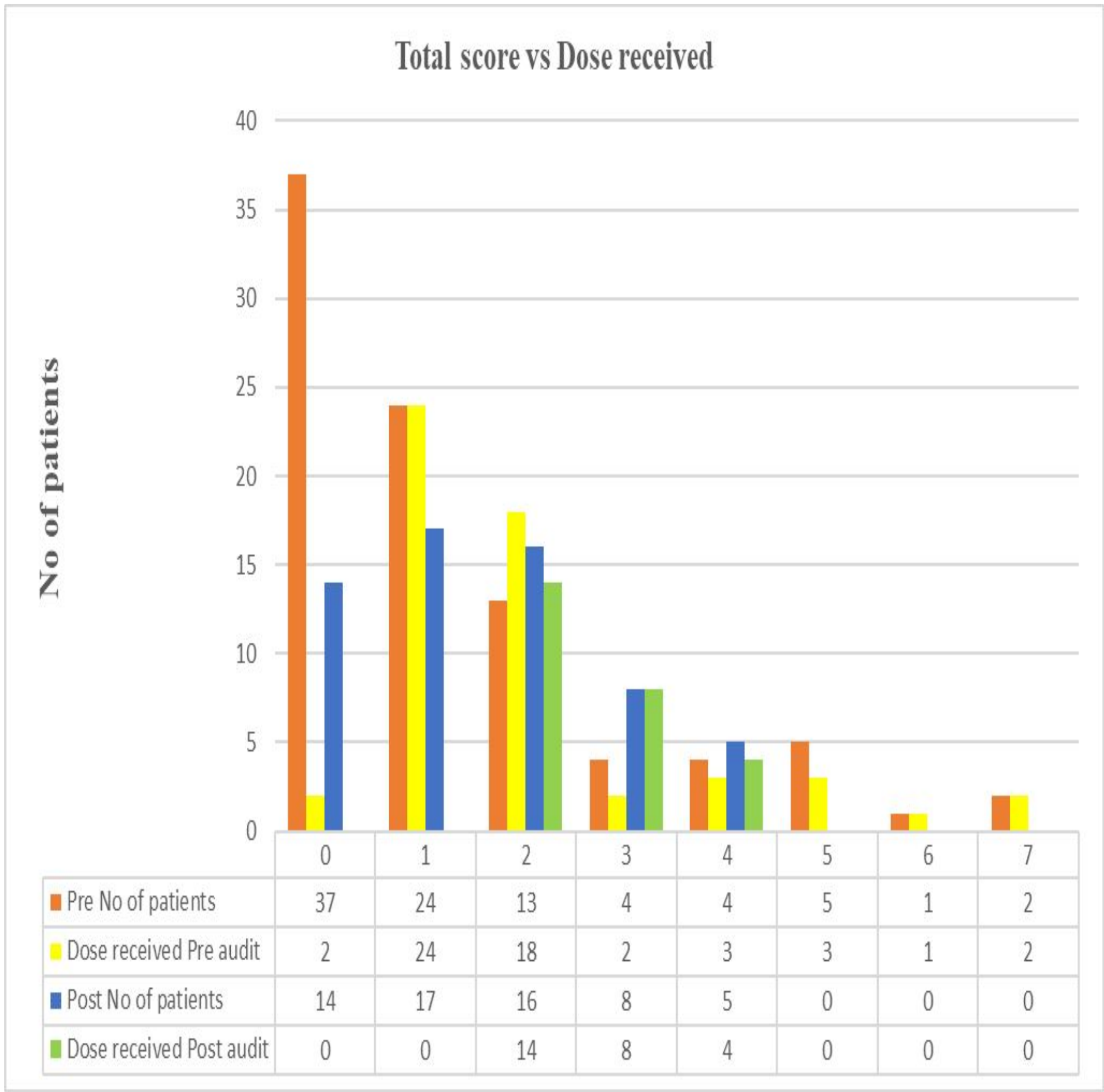
Data were collected retrospectively from the hospital records of all postnatal women on VTE risk assessment, dose and duration of thromboprophylaxis for three consecutive months. A VTE prophylaxis sticker was then designed and introduced to all postpartum women, followed by a prospective re-audit over two months. Risk stratification and thromboprophylaxis were evaluated as per the RCOG guideline.

Risk factors for VTE in antenatal and postnatal mothers		
Pre-existing risk factors	Tick	Score
Previous VTE (factor & single event related to major surgery)		3
Previous VTE provoked by major surgery		3
Known high risk thrombophilia		3
Medical comorbidities e.g: cancer, heart failure, active SLE, inflammatory poly arthropathy or IBD, nephrotic syndrome, type 1 DM with nephropathy, sickle cell disease, current intravenous drug user		3
Family history of unprovoked or estrogen-related VTE in first degree relative		1
Known low risk thrombophilia (no VTE)		1
Age (>35 years)		1
Obesity BMI ≥30		1
BMI≥40		2
Parity ≥3		1
Smoker		1
Gross varicose veins		1
Obstetric risk factors		
Pre-eclampsia in current pregnancy		1
ART/IVF (antenatal only)		1
Multiple pregnancy		1
Caesarean section in labour		2
Elective caesarean section		1
Mid-cavity or rotational operative delivery		1
Prolonged labour (>24 hours)		1
PPH (> 1 litre or transfusion)		1
Preterm birth < 37 weeks in current pregnancy		1
Stillbirth in current pregnancy		1
Transient risk factors		
Any surgical procedure in pregnancy or puerperium except immediate repair of the perineum, e.g: appendicectomy, postpartum sterilization		3
Hyperemesis		3
Cesarean (first trimester only)		3
Current systemic infection		1
Immobility, dehydration		1
Total		
Contraindications to LMVH (circle)	Yes	No

Score	Management plan	Tick
0	No thromboprophylaxis	
1	Avoidance of dehydration and mobilization	
2	Postpartum prophylaxis for 10 days	
3	Prophylaxis from 3 rd trimester to 6 weeks postpartum	
≥4	Prophylaxis from 1 st trimester to 6 weeks postpartum	

Results

The initial retrospective audit included 90 postnatal women, and the prospective re-audit following the introduction of the VTE sticker included 60 women. In the initial audit, 37, 24, 18 and 16 women scored 0, 1, 2, and ≥ 3, respectively; however, none had their risk scores documented in the hospital records. 5.4% (2/37) with a score of 0, and 100% (24/24) with a score of 1 received LMWH, although not indicated. 72.2% (13/18) scoring 2 received LMWH, albeit only for two days, while 68.7% (11/16) women with a score of ≥3 received LMWH, with only nine women receiving LMWH for the recommended six weeks duration. Following the re-audit, 14, 17, 16 and 13 women scored 0, 1, 2 and ≥3, respectively, with 100% documentation of risk scores. Among those with a score of 0 and 1, 100% complied with the RCOG guideline and did not receive pharmacological thromboprophylaxis. For women with a score of 2, 87.5% (14/16) received LMWH, albeit only for two days, and 100% of those with a score of ≥3 received LMWH for six weeks complying with the guideline



Conclusion

A decrease in unnecessary pharmacological thromboprophylaxis among postpartum women at low risk for VTE and an increase in the percentage of women with scores of ≥2 receiving pharmacological thromboprophylaxis was observed following the introduction of the VTE sticker. Financial constraints accounted for women discontinuing thromboprophylaxis. The VTE sticker helped maintain acceptable levels of clinical accuracy in risk stratification and targeted pharmacological thromboprophylaxis per the RCOG guideline.

References

- 1.Priyanka Rajandran, Papa Dasari and Chitra Thyagarajan Recurrent acute pancreatitis In pregnancy International Journal of Clinical Obstetrics and Gynaecology 2021; 5(5): 139-142
2. . Hot S, Eğin S, Gökçek B, Yeşiltaş M, Karakaş DÖ. Acute biliary pancreatitis during pregnancy and in the postdelivery period. Ulus Travma Ve Acil Cerrahi Derg Turk J Trauma Emerg Surg TJTES 2019;25(3):253-8.
3. Abdullah B, Kathiresan Pillai T, Cheen LH, Ryan RJ.Severe Acute Pancreatitis in Pregnancy. Case Rep Obstet Gynecol 2015;2015:e239068.