GLOBAL THROMBOSIS FORUM

GTF
Global Thrombosis Forum
(an affiliate of the North American Thrombosis Forum – NATF)
In partnership with NATF in Community Service from Thrombosis

(An associate Society of the International Union of Angiology)

NATF
North American Thrombosis Forum

Fourth Rajan Memorial Symposium:

Prevention of Fatal PE

Sunday, January 14, 2024, 10:30 am–2:30 pm EST

Venue: Residence of Dr. & Mrs. Vosudesh Pai, 10590 Montclair Way, Johns Creek, GA, 313-550-3470

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AGENDA

Comperes: Nysha Reddy and Ragini Mohan

10:30 am: Guest arrival

11:00 am Introduction: Atul Laddu, M.D, Ph.D.

Opening remarks: Margaret F. Callahan, Ph.D.

11:05-11:25 pm Keynote Presentation:
Prevention of fatal pulmonary emboli: The missing link
Speaker: Joseph Caprini, MD, Senior Clinician Educator at the Pritzker School of Medicine at the University of Chicago

Fatal pulmonary emboli (FPE) are the number one preventable cause of death after surgery or hospitalization. Despite that fact, the incidence of fatal pulmonary emboli has risen. We have enough data consisting of 146 trials from around the world from 1975 to 2005 demonstrating the effectiveness of heparin (UFH) and low molecular weight heparin (LMWH) to prevent 99% of FPE. These trials have demonstrated that administration of either anticoagulant for seven to 10 days postoperatively is required to achieve these results. The Caprini Risk Score (CRS) is a forty-element history and physical exam that identifies patients who are at risk and helps the clinician decide the length of anticoagulation. Given these powerful tools, why hasn't there been a decline in this fatal complication? The answer is a lack of consistent, universal, and mandatory implementation of evidence-based care pathways based on the available data and the CRS. The Boston Medical Center has been a leader in this regard with 18 publications demonstrating the effectiveness of a program that includes mandatory implementation of thrombosis prophylaxis. Clinicians always “opt-out” to protect an individual patient who may be at high risk of bleeding. This program has successfully reduced the incidence of all VTE events to less than 1% for more than a decade. Physicians' buy-in has been achieved over the years as skeptics observing this success, joined the program. Widespread adoption of this program with modifications suited to individual differences in hospital environments, ability to collect data in different cultures, and other factors should eventually result in lowering of this serious problem.

GTF Scholar Presentations:

11:30-11:50 pm Heparin Induced Thrombotic Thrombocytopenia: Krish Raina, Ragini Mohan, Mentor: Neha Thomas

Heparin-induced thrombotic thrombocytopenia (HITT) is a condition that may develop following large doses of Heparin. In some cases, this can cause platelet levels to drop significantly and develop the blood. Around 5% percent of the patients who are given heparin develop HIT. HIT is caused by the production of an antibody against heparin in the blood. The antibodies form HPF4 (Heparin Platelet Factor 4) complexes against heparin, resulting in the reduction of platelets, also known as thrombocytopenia. A condition known as VITT (Vaccine-Induced Thrombotic Thrombocytopenia) mimics HITT except that it is caused by the administration of AstraZeneca Covid-19 Vaccine. The diagnosis of HITT is made by ELISAs (Enzyme Linked Immunosorbent Assays) and Chemiluminescence Assays. In patients with HITT, symptoms include hypercoagulable states, reduced platelet counts, and even gangrene of the lower limb or the toes in extreme cases. HITT is managed by the administration of direct thrombin inhibitors, or DOACs, such as Argatroban (administration of heparin is contraindicated).

11:50-12:10 pm Heavy Menstrual Bleeding (HMB) and anticoagulants: Anvit Divekar, and Nysha Reddy,
Mentor: Atul Laddu

Heavy Menstrual Bleeding (HMB, formerly known as menorrhagia) is a common disorder among menstruating women. It refers to bleeding.

- Lasting longer than seven days
- Involves more blood flow than is typical during menstruation.
- In which one must change the pad every hour for several hours back-to-back
- With blood clots the size of a quarter or even larger
- So heavy that it interferes with physical, emotional, or material quality of life.

HMB is a well-known adverse effect of anticoagulant therapy. As women do not necessarily spontaneously report their menstrual bleeding patterns and physicians may not inquire about them, HMB may be missed during clinic visits, and potentially useful treatment options may therefore not be considered, discussed, and implemented.

12:10-12:30 pm Underutilization of Aspirin in secondary prevention:
Arushi Garud, Nethra Pai, Mentor: Atul Laddu, MD

Aspirin is an effective and low-cost option for reducing atherosclerotic cardiovascular disease (CVD) events and improving mortality rates among individuals with established CVD. To guide efforts to mitigate the global CVD burden, there is a need to understand current levels of aspirin use for secondary prevention of CVD.

Worldwide, aspirin is underused in secondary prevention, particularly in low-income countries. National health policies and health systems must develop, implement, and evaluate strategies to promote aspirin therapy.

We researched the literature to find the incidence of utilization of aspirin in various countries and the reason why underdeveloped countries underutilize aspirin.

12:30- 12:50 pm Trust in Pharmaceuticals: Arushi Dua, Shriya Sawant, and Sonal Kapuria, Mentor: Atul Laddu

Patients trust that what they receive from the pharmaceutical company contains the correct active ingredients in the correct amounts, that the inactive ingredients function as intended, that they don't contain other harmful substances, and have been tested in animals as well as in humans. Clinical studies are conducted and submitted to the FDA for approval. In a business that relates to fundamental aspects of health and well-being, a key ingredient of trust is transparency, especially around clinical trials, and science. We need to make every effort to raise pharma’s credibility with the public. The industry must carry these functions forward by emphasizing compassion, embracing shared goals, and committing to flexibility and agility.

12:55 -1:15 pm Cancer-Associated Thrombosis: Biomarker of Thrombo-Inflammation

Drs. Fakiha Siddiqui, Amir Darki, Alfonso Tafur, Debra Hoppensteadt, Eduardo Ramacciotti, Bulent Kantarcioglu, Manuel Monreal, and Jawed Fareed

Introduction: Cancer-associated thrombosis (CAT) was first described in 1823 by Jean-Baptist Bouillaud. Later, Trousseau explained the relationship in 1865 and referred to it as Trousseau Syndrome. Venous thromboembolism (VTE) is a major complication of malignancy and a cause of mortality. There is an increased incidence (4-20 %) of clinically overt deep vein thrombosis (DVT) in patients with cancer, who are at a 4 to 6.5-fold higher risk of developing thrombotic events. The pathogenesis of coagulation in cancer is a complex and multifaceted phenomenon, which besides following Virchow's Triad also involves the mediators released from the tumor cells and inhibition of fibrinolysis. This study was designed to profile thrombo-inflammatory biomarkers, including those associated with endothelial disruption in patients with CAT which may add insight into the pathogenesis of CAT.

These studies suggest that CAT patients exhibit amplified levels of vWF, TNF-α, and F-IX. It is speculated that these factors may explain different pathobiology of CAT.

1:15 -1:30 pm Concluding remarks: Jawed Fareed, Ph. D., Atul Laddu, M.D,

1:30-2:30 pm Lunch