

Introduction

Four-factor prothrombin complex concentrate (4F-PCC) has been the staple of use for the reversal of acute major bleeds in emergency departments. 4F-PCC has the ability to rapidly and effectively achieve hemostasis for emergent warfarin reversal bleeds.¹ 4F-PCC contain the vitamin K-dependent coagulation factors II, VII, IX and X resulting in it being highly efficacious in normalizing INR.

Due to short-term delay in product release, a shortage of 4F-PCC caused major concern for pharmacists and physicians alike.² This shortage deterred the use of INR-based dosing, as seen in the package inserts, and forced the study of fixed 4F-PCC dosing. The administration of a fixed dose of 1500 IU of 4F-PCC was proven to have evidence of high rates of successful INR reversal and no related thrombotic adverse events within 7 days.³ Thus, suggesting good efficacy and safety when using 1500 IU of 4F-PCC for emergent warfarin reversal.⁴ Samaritan Hospital has initiated a 1500 IU fixed dose of 4F-PCC protocol, leading to the opportunity to review the efficacy and safety of fixed-dosed 4F-PCC when compared to INR-based dosing.

Objectives

To evaluate efficacy of fixed dosed Four-factor Prothrombin Complex Concentrate (4F-PCC) compared to INR-based dosing for reversal of emergent warfarin associated bleeding

Methods

A retrospective analysis of patients who received 4F-PCC in the Emergency Department or upon admission for warfarin associated bleeding was conducted. Electronic medical records were evaluated for record of 4F-PCC administration and dose.

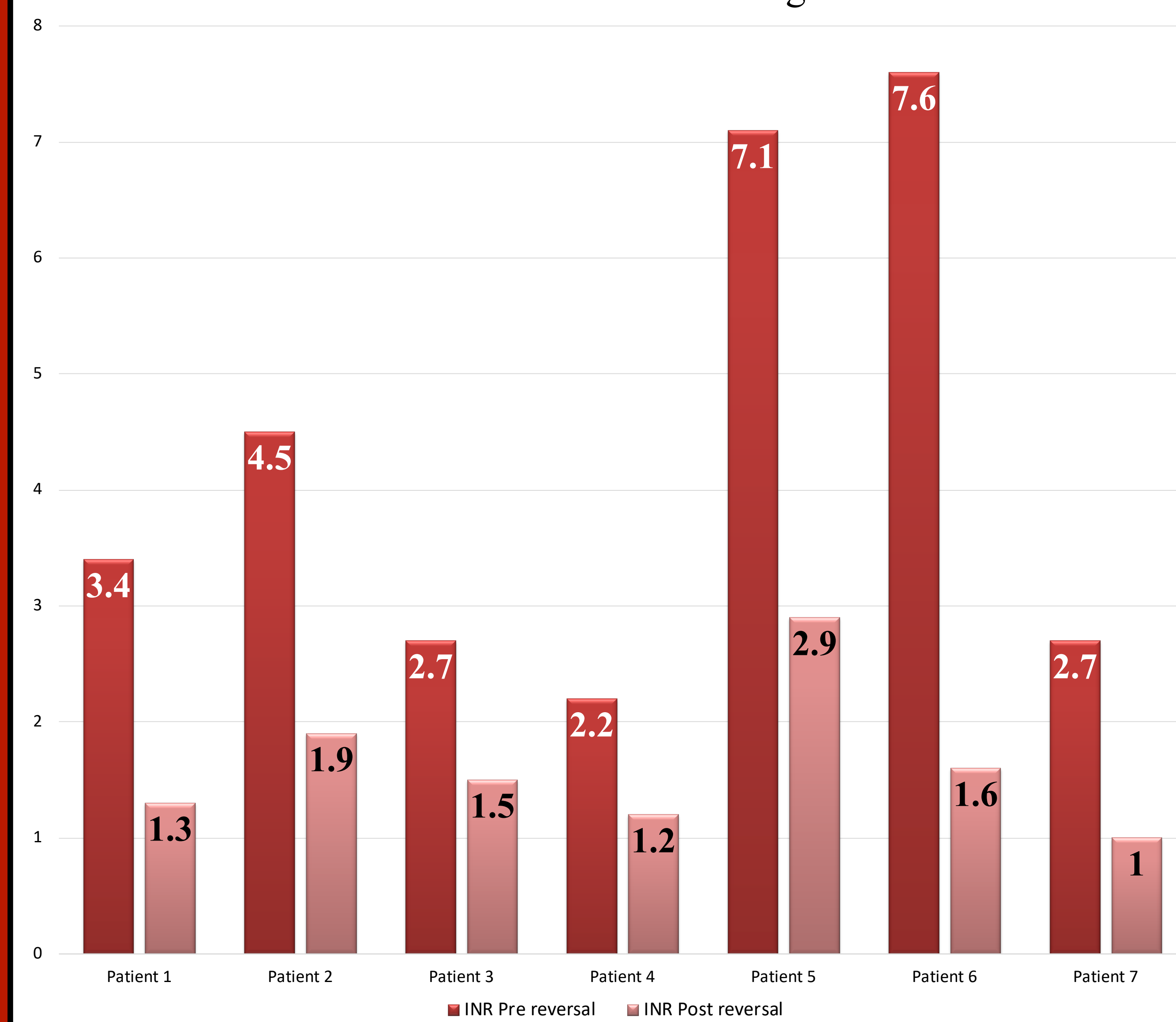
Time-frame: 01/01/2019 to 12/31/19

Variables:

- Patients currently on warfarin therapy
- Patients who had a recorded pre-INR
- Patients who had a recorded post-INR
- Patients who received fixed 1500 IU of 4F-PCC

Results

Pre INR vs. Post INR following 4FPCC



Discussion

After reviewing the included patients, 1500 IU of 4F-PCC proved to be efficacious in VKA bleeding reversal. Each patient obtained a therapeutic INR of 2.0– 3.0 after receiving the fixed dose of 4F-PCC.

Implementation of a fixed 1,500 IU dose can reduce medication supply use in hospitals and provide the drug more rapidly as there is no need to wait for INR results for dosing.

A standardized order of a fixed-dose can be implemented according to a hospital's electronic medical record for providers to initiate.

References

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Disclosure: Authors of the presentation have the following to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation:
Kaitlin Farley: nothing to disclose; Bianca Melero: nothing to disclose