

# REVERTING VITAMIN K ANTAGONISTS WITH PROTHROMBIN COMPLEX CONCENTRATE – A THREE-YEAR RETROSPECTIVE STUDY

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## Background

Correcting coagulopathy has been a difficult challenge for hematologists throughout the world. Practice guidelines recommend vitamin K for the reversal of anticoagulation in asymptomatic patients with elevated INR, in patients who require surgery and in patients with serious bleeding. Prothrombin Complex Concentrate (PCC) is having progressive importance in bleeding management and reversal of International Normalized Ratio's (INR) in patients taking oral vitamin K antagonists (VKA)

## Aims

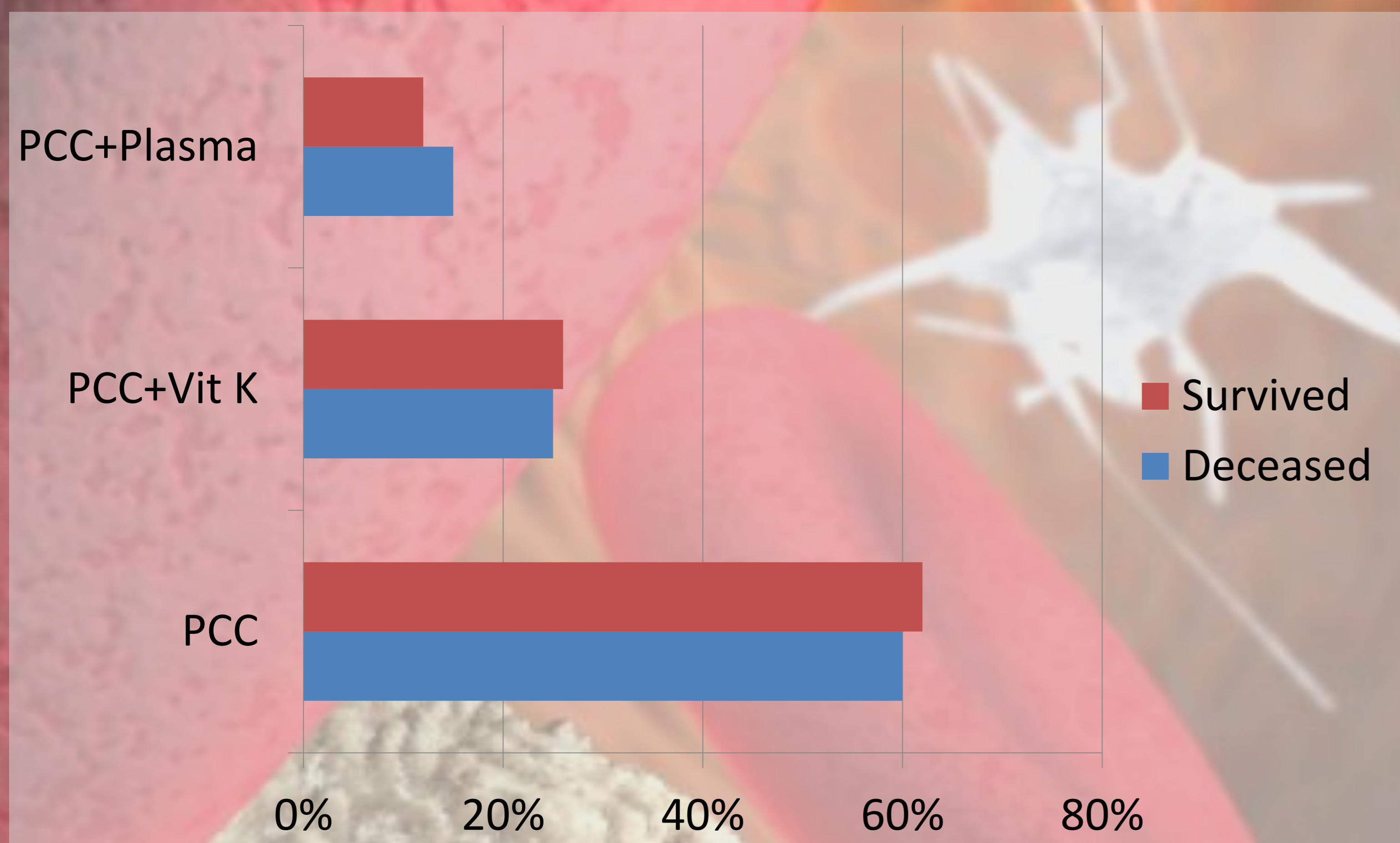
The main objective of our study is to determine the efficiency of PCC in the correction of INR in patients taking oral VKA and try to understand if the administration of vitamin K plays a role in the survival rates in these patients

## Methods

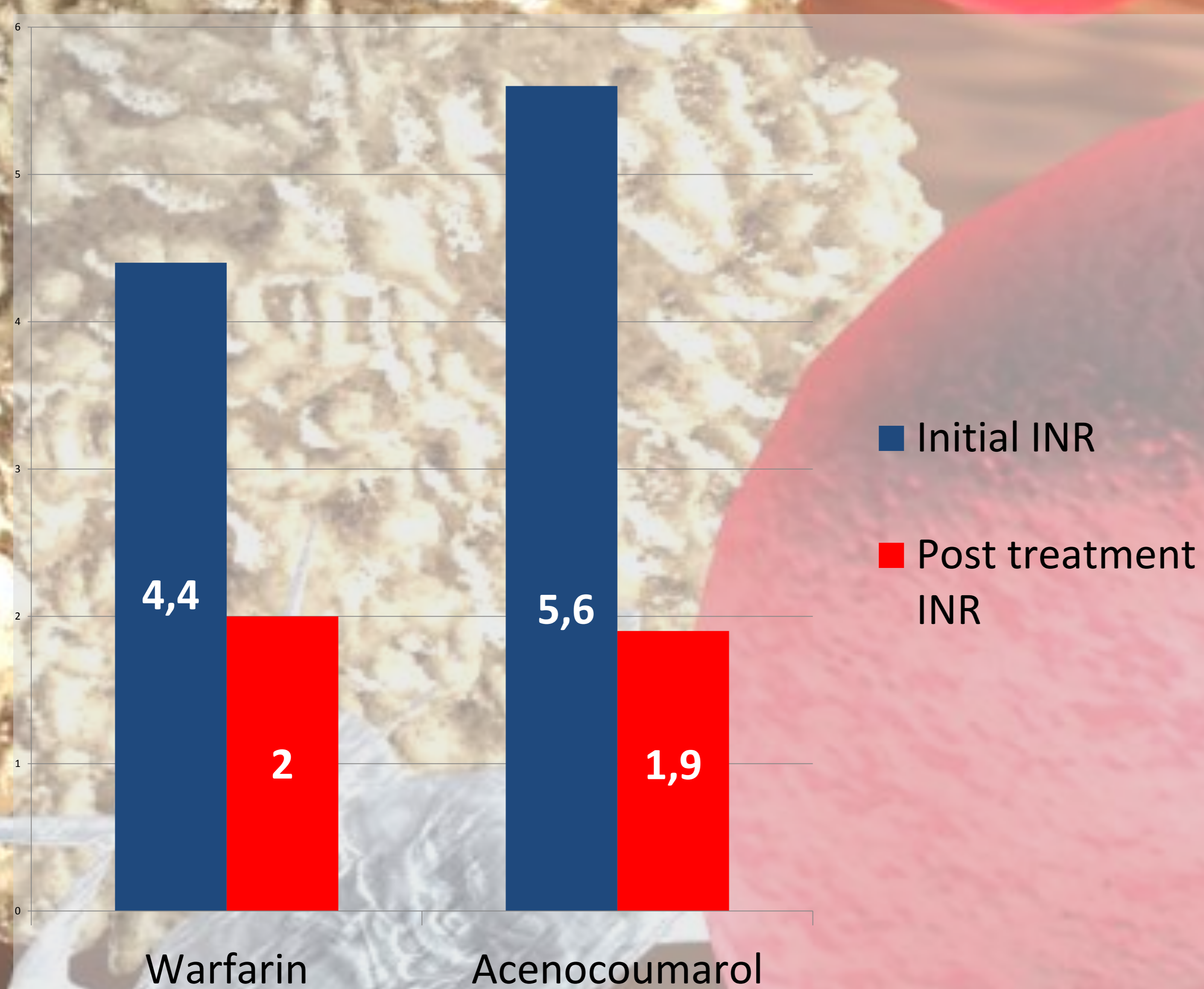
We carried out a retrospective, unicenter, descriptive study that included 54 patients taking oral VKA that required Octaplex® administration in order to try to control bleeding and/or correct INR. Of these patients 55% were female and 45% male. Average age was 76 years old. The data was collected from March 2011 to November 2014. The INR results were collected before and after the treatment with PCC.

## Results

87% of the studied patients (47 patients) were taking warfarin and 13% (7 patients) acenocoumarol. The main cause of treatment was atrial fibrillation. PCC was administered in 78% due to bleeding and in 22% of the cases to prepare patients for surgery. The mean administered doses were approximately 800IU. Pre-treatment INR determination was 4,4 in the warfarin group and 5,6 in the acenocoumarol group. In 26% of the patients it was not possible to have an absolute INR value (INR>10), 12 patients in the warfarin group (26% of the group) and 1 in the acenocoumarol group (14% of the group). After treatment all patients had a measurable INR and 37% of them had an INR ≤1,5. The INR values dropped to 1,9 in the acenocoumarol group and to 2 in the warfarin group. 18 patients received concomitantly i.v. vitamin K administration. 17 of them 10mg and one 20mg. We compared patients who only received PCC (33 patients) with those that received PCC and vitamin K (14 patients) and the impact on mortality. We excluded patients who did concomitant treatment with plasma (7 patients). We found a mortality of 36% in both groups, but we must point out their non-uniformity. None of the patients enrolled presented reported thrombotic complications. Patients presented different bleeding sites: 23% intracranial (67% mortality), 40% gastrointestinal (38% mortality) and 37% other (33% mortality). The overall mortality was 37%. Bleeding patients presented a mortality of 43% compared with no bleeding that presented mortality of 21%.



Post treatment survival rate with PCC, PCC+Vit K and PCC+Plasma



Initial and post treatment INR in both warfarin and acenocoumarol groups

## Conclusions

This study shows that Octaplex® treatment is efficient reversing the INR in patients taking oral VKA. In this population we didn't find any difference, regarding overall mortality, between patients who had taken vitamin K plus PCC and those who had only taken PCC. We found a higher mortality rate in these bleeding patients.