Introduction:
Desmopressin (DDAVP) is a vasopressin analogue which improves platelet function. Its general use as a haemostatic agent is still controversial. The aim of study was to evaluate the effect of prophylactic desmopressin in blood coagulation in patients undergoing heart valve surgery.

Methods:
Prospective, randomized, double-blind clinical trial performed at the Heart Institute of the University of São Paulo. A total of 108 adult patients undergoing heart valve surgery were enrolled from February 2015 to November 2016. Immediately after cardiopulmonary bypass weaning and heparin reversal, patients were randomized in ratio 1:1 to intervention group: DDAVP (0.3 µg/kg) or control group. Blood samples were drawn at three different times, at baseline (T0), 2 hours (T1) and 24 hours (T2) after study medication. Blood coagulation and perioperative bleeding were analysed using laboratorial tests and thromboelastometry, chest tube drainage and requirement of allogenic transfusion within 48 hours.

Results:
A total of 54 patients were allocated to intervention and 54 to control group. Blood levels of factor VIII at T2 (236.5 ± 62.9 vs. 232.3 ± 66.7, P=0.015) and prothrombin time [14.1 (12.9 - 15.2) vs. 13.4 (12.1 - 14.5), P=0.007] were significantly higher in desmopressin group. Standard coagulation tests, as well as viscoelastic and platelet aggregation tests, were similar between groups. There was no difference in postoperative drainage and blood transfusion [10% (21.3) vs. 15%, P=0.526] between desmopressin and control group.

Conclusion:
Prophylactic use of desmopressin in heart valve surgery does not influence coagulation and thromboelastometric parameters.