Abstract:
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Objective:
Aim of the study is to evaluate the effect of two topical haemostatic agents, platelet-rich gel and fibrin sealant, on perioperative bleeding and need of blood transfusion after elective cardiac surgery.

Method:
Forty patients (mean age 68±10 years) (Group 1) who underwent elective cardiac surgery received autologous Vivostat haemostatic agent (platelet-rich gel, n=26, fibrin sealant, n=14) by means of spraypen applicator (8.2-8.5 mL per patient). Topical haemostatic agents were applied to either the right and left side of the sternum, to the proximal and distal anastomoses, site of internal thoracic artery harvesting, on the surgical sites. Postoperative bleeding data and need of blood transfusion after use of topical haemostatic agents were compared to those of forty patients (mean age 68.5±10 years) (Group 2) operated on the same data. Age >70 years represented a selection criterion to blood transfusion for postoperative haemoglobin value <10.5 gr/dL.

Results:
There was no in-hospital mortality. Baseline characteristics, preoperative clotting variables, cardiopulmonary and aortic cross-clamp times were similar in Group 1 and Group 2. At 12 postoperative hours need of blood transfusion and mean number of blood units /patient were lower in Group 1 as compared to Group 2 (11/40 vs 20/40, p=0.05, and 0.5±0.6 vs 0.9±1.1, p=0.2); in Group 1 as compared to Group 2 chest drainage at 12 and 24 postoperative hours was 200±131 vs 267±128 mL (p=0.03) and 330±195 vs 411±187 mL (p=0.08), respectively. Postoperative mean value of haemoglobin was similar among Group 1 (11±1.1 gr/dL) and Group 2 (11.2±1.6 gr/ dL) (p=NS).

Conclusions:
Autologous topical haemostatic agents can be effective in reducing bleeding and need of blood transfusion after cardiac surgery.