Acetylsalicylic

Closure of guide wire-induced coronary artery perforation with a two-component fibrin glue.

Authors: Storger H., Ruef J.

Publication Date: 2007

Abstract:

Perforation or rupture of a coronary artery with subsequent pericardial effusion and cardiac tamponade is a potentially life-threatening complication of percutaneous coronary intervention (PCI). Several emergency treatment strategies exist to close the perforation including reversal of anticoagulation, prolonged balloon inflation, implantation of stent grafts, local injection of thrombogenic molecules, placement of microcoils, or open heart surgery. Here we report on a 66-year-old patient who underwent urgent PCI for acute stent thrombosis in the proximal LAD. The artery was reopened, a new stent implanted successfully, and a GPIIb/IIIa-antagonist was given. Shortly thereafter the patient suffered from cardiac tamponade requiring pericardiocentesis and pericardial drainage. The coronary angiogram indicated a severe guide wire-induced perforation and pericardial effusion originating from a distal diagonal branch segment. Prolonged balloon inflation did not stop the leakage. Therefore the monorail balloon was exchanged for an over-the-wire balloon. A two-component commercial fibrin glue consisting of fibrinogen and thrombin was rapidly but separately injected through the wire channel of the balloon into the distal segment of the diagonal branch. The coronary leak was successfully closed and the patient recovered quickly. In comparison with the previously reported cases of thrombin injection important differences should be noticed: (1) a two-component hemostatic seal was used without reversal of anticoagulation, (2) rapid injection instead of prolonged infusion of the hemostatic drugs was performed, and (3) the rescue technique was applied in a cath lab that routinely uses monorail catheter systems. Therefore we consider this a novel and effective approach for closure of coronary ruptures.

Inc.

Pharmacological strategies to decrease transfusion requirements in patients undergoing surgery.

Authors: Porte R.J., Leebeek F.W.G.

Publication Date: 2002

Abstract:

Surgical procedures are inevitably associated with bleeding. The amount of blood loss may vary widely between different surgical procedures and depends on surgical as well as non-surgical factors. Whereas adequate surgical haemostasis may suffice in most patients, pro-haemostatic pharmacological agents may be of additional benefit in patients with (diffuse) surgical bleeding or in patients with a specific underlying haemostatic defect. In general, surgical haemostasis and pharmacological therapies can be complementary in controlling blood loss. The use of pharmacological therapies to reduce blood loss and blood transfusions in surgery has historically been restricted to a few drugs. Antifibrinolytic agents (aprotinin, tranexamic acid and aminocaproic acid) have the best evidence supporting their use, especially in cardiac surgery, liver transplantation and some orthopaedic surgical procedures. Meta-analyses of randomised, controlled trials in cardiac patients have suggested a slight benefit of aprotinin, compared with the other antifibrinolytics. Desmopressin is the treatment of choice in patients with mild haemophilia A and von Willebrand disease. It has also been shown to be effective in patients undergoing cardiac surgery who received aspirin up to the time of operation. However, overall evidence does not support a beneficial effect of desmopressin in patients without pre-existing coagulopathy undergoing elective surgical procedures. Topical agents, such as fibrin sealants have been successfully used in a variety of surgical procedures. However, only very few controlled clinical trials have been performed and scientific evidence supporting their use is still limited. Novel drugs, like recombinant factor VIIa (eptacog alfa), are currently under clinical investigation. Recombinant factor VIIa has been introduced for the

treatment of haemophilia patients with inhibitors, either in surgical or non-surgical situations. Preliminary data indicate that it may also be effective in surgical patients without pre-existing coagulation abnormalities. More clinical trials are warranted before definitive conclusions can be drawn about the safety and the exact role of this new drug in surgical patients. Only adequately powered and properly designed randomised, clinical trials will allow us to define the most effective and the safest pharmacological therapies for reducing blood loss and transfusion requirements in surgical patients. Future trials should also consider cost-effectiveness because of considerable differences in the costs of the available pro-haemostatic pharmacological agents.

Surgical treatment of peptic ulceration.

Authors: Kellum J.M.

Publication Date: 1991

Abstract:

During the past year, evidence has accrued that while the incidence of elective surgery for peptic ulcer disease over the past 20 years has declined, the need for emergency surgery has remained stable and has been seen in higher risk patients. Ulcer complications, particularly perforation, are likely to occur in the elderly and in those taking nonsteroidal anti-inflammatory drugs. Proximal gastric vagotomy continues to gain in credibility as a definitive operation for duodenal ulcer, with reports of recurrence rates of 12% and 15% in two articles reporting follow-up of at least 10 years; however, much higher recurrence rates were observed in patients with prepyloric ulcers, pyloric channel ulcers, and combined gastric and duodenal ulcers. Techniques have been reported this year for the laparoscopic performance of a modified proximal gastric vagotomy that the author believes will broaden the application of surgery for duodenal ulcer.

Use of absorbable fibrin sealant patch (TachoSil) for hemostasis in split liver transplantation.

Authors: Vicentine F., Perdigao F., Goumard C., Brustia R., Sepulveda A., Soubrane O., Scatton O.

Publication Date: 2016

Abstract:

Introduction: Split liver transplantation (SLT) now reaches similar results as whole liver transplantation (WLT), but is not free of complications, such as hemorrhage and bile leak from cut surface area. An absorbable fibrin sealant patch (TachoSil) may be used by liver surgeons to improve hemostasis control from the cut surface. The objective was to assess the efficacy of TachoSil to improve hemostasis control from cut surface area in patients undergoing to split liver transplantation (SLT). Material and methods: From May 2000 to January 2014, all adult patients undergoing a SLT with right/right extended grafts were retrospectively included and divided into two groups according to the use of TachoSil on the cut surface. Donor and recipient characteristics, blood transfusion rate, aspirin use, postoperative complications and biology were recorded. Results: Among 57 patients who underwent SLT, 23 (40.3%) had TachoSil and 34 (59.6%) didn't. The two groups characteristics were comparable (age, gender, BMI, Child, Meld, indication of liver transplantation). A mean of 2 patch per patient were used in TachoSil group. The blood transfusion rate during SLT was not different between the two groups (11 with TachoSilO versus 18 without TachoSil (p = 0.79)), but the mean number of packed red blood cells per patient was significantly lower in the TachoSil group (2.6 versus 8.3 units, p = 0.04). Conclusion: TachoSil use during SLT can be helpful in hemostasis control from cut surface, since when blood transfusion is needed, the number of packed red blood cells used is significantly lower.

Use of absorbable fibrin sealant patch (tachosil) for hemostasis in the split liver transplantation.

Authors: Vicentine F., Perdigao F., Brustia R., Goumard C., Sepulveda A., Schielke A., Soubrane O., Scatton O.

Publication Date: 2015

Abstract:

INTRODUCTION: Split liver transplantation (SLT) has nowadays similar results of whole liver transplantation (WLT), but is not free of complications, like bleeding and bile leak from cut surface area. The absorbable fibrin sealant patch (TachoSil) is a tool known in liver surgery domain to improve hemostasis control from cut surface. OBJECTIVE : To evaluate the efficacy of TachoSil to improve hemostasis control from cut surface area in patients undergoing to split liver transplantation (SLT). MATERIAL AND METHODS: From May 2000 to January 2014 all adult patients undergoing to SLT with right or right extended grafts were retrospectively included and divided into two groups according to the use of TachoSil on the cut surface. Donor and Receiver characteristics, blood transfusion, aspirin use, postoperative complications and biology were recorded. RESULTS: 57 patients underwent to SLT, 23 (40.3%) with TachoSil and 34 (59.6%) without. The two groups were comparable in terms of donor and recipients characteristics (age, gender, BMI, Child, Meld, indication of liver transplantation and presence of Hepatocellular carcinoma). A mean of 2 patch per patient were used in TachoSil group. No difference among the two groups was found concerning the patient needing blood transfusion during SLT: 11 with TachoSil versus 18 without TachoSil (p=0.79). Despite, but the number of packed red blood cells used per patient was lower in the group with TachoSil than in the group without TachoSil (2.63 versus 8.33 units, p=0.04). CONCLUSION : TachoSil use during SLT can be helpful in hemostasis control from cut surface: when blood transfusion is needed, the number of packed red blood cells used is significantly lower.

Effect on Blood Loss and Cost-Effectiveness of Pain Cocktails, Platelet-Rich Plasma, or Fibrin Sealant After Total Knee Arthroplasty.

Authors: Bernasek T.L., Burris R.B., Fujii H., Levering M.F., Polikandriotis J.A., Patterson J.J.

Publication Date: 2012

Abstract:

This study evaluated the effect of periarticular pain cocktail, platelet-rich plasma, or fibrin sealant injections on blood loss, transfusion rate, and hospital costs after total knee arthroplasty. A retrospective review of 400 patients undergoing primary total knee arthroplasty with one of the different periarticular treatments as stated above was performed. Postoperative blood loss, hemoglobin levels, allogenic blood transfusion rates, and per-case hospital injection cost were reported. Although platelet-rich plasma and fibrin sealant decreased blood loss compared with the control group ($P < .001$), there was no significant difference in blood loss in the pain-cocktail group or in postoperative hemoglobin levels or transfusion rates between all groups. Significant efficacy and cost-effectiveness for these modalities could not be identified and have, therefore, been discontinued at our practice. Level of evidence: level III.

Early postoperative efficacy of fibrin glue in face lifts: A prospective randomized trial [15].

Authors: Jones B.M., Grover R.

Publication Date: 2007

Abstract:

Not Available

Prevention of bleeding after islet transplantation: Lessons learned from a multivariate analysis of 132 cases at a single institution.

Authors: Villiger P., Ryan E.A., Owen R., O'Kelly K., Oberholzer J., Saif F.A., Kin T., Wang H., Larsen I., Blitz S.L., Menon V., Senior P., Bigam D.L., Paty B., Kneteman N.M., Lakey J.R.T., Shapiro A.M.J.

Publication Date: 2005

Abstract:

Islet transplantation is being offered increasingly for selected patients with unstable type 1 diabetes. Percutaneous transhepatic portal access avoids a need for surgery, but is associated with potential risk of bleeding. Between 1999 and 2005, we performed 132 percutaneous transhepatic islet transplants in 67 patients. We encountered bleeding in 18/132 cases (13.6%). In univariate analysis, the risk of bleeding in the absence of effective track ablation was associated with an increasing number of procedures (2nd and 3rd procedures with an odds ratio (OR) of 9.5 and 20.9, respectively), platelets count <150 000 (OR 4.4), elevated portal pressure (OR 1.1 per mm Hg rise), heparin dose >=45 U/kg (OR 9.8) and pre-transplant aspirin (81 mg per day) (OR 2.6, p = 0.05). A multivariate analysis further confirmed the cumulative transplant procedure number (p < 0.001) and heparin dose >=45 U/kg (p = 0.02) as independent risk factors for bleeding. Effective mechanical sealing of the intrahepatic portal catheter tract with thrombostatic coils and tissue fibrin glue completely prevented bleeding in all subsequent procedures (n = 26, p = 0.02). We conclude that bleeding after percutaneous islet implantation is an avoidable complication provided the intraparenchymal liver tract is sealed effectively.

Surgical treatment of peptic ulceration.

Authors: Kellum J.M.

Publication Date: 1991

Abstract:

During the past year, evidence has accrued that while the incidence of elective surgery for peptic ulcer disease over the past 20 years has declined, the need for emergency surgery has remained stable and has been seen in higher risk patients. Ulcer complications, particularly perforation, are likely to occur in the elderly and in those taking nonsteroidal anti-inflammatory drugs. Proximal gastric vagotomy continues to gain in credibility as a definitive operation for duodenal ulcer, with reports of recurrence rates of 12% and 15% in two articles reporting follow-up of at least 10 years; however, much higher recurrence rates were observed in patients with prepyloric ulcers, pyloric channel ulcers, and combined gastric and duodenal ulcers. Techniques have been reported this year for the laparoscopic performance of a modified proximal gastric vagotomy that the author believes will broaden the application of surgery for duodenal ulcer.