transfuse old or young FFP is random at any given time, the probability of receiving old or young FFP varied over the study period. In addition, during the 10-year period, operation techniques, transfusion strategies, and supportive care have also changed. As a result, the increased survival of patients receiving young FFP might not be related to the properties of the transfused plasma but rather to the improvements in operative, supportive, or nursing strategies, which happen to temporally coincide with the probability of receiving young FFP.

We examined time trends in FFP storage time in The Netherlands by documenting the storage time of FFP between 2004 (a new transfusion information system was introduced in our hospital in 2004) and 2009 in the Leiden University Medical Center. Table 1 shows that the number of patients who have received only old FFP and only young FFP has changed significantly during these years. Similar differences may form an alternative explanation for the association between old FFP and mortality as reported by van Straten and colleagues. We agree with the authors that additional studies are necessary to resolve this issue.

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HUMAN SAPHENOUS VEIN “NO-TOUCH” HARVESTING AND VASA VASORUM

To the Editor:

Dreifaltdt and colleagues¹ carried out an elegant image study to evaluate the impact of vein graft harvesting technique on the structure and function of vasa vasorum. The total area of vasa vasorum in vein grafts harvested with the conventional technique was significantly reduced in both the media and the adventitia compared with vein grafts harvested with the “no-touch” technique that preserved an intact vasa vasorum, whereas the conventional technique did not.¹ These findings corroborate Dashwood and colleagues² hypothesis that vasa vasorum preservation could represent one of the mechanisms underlying the possible improved patency of saphenous vein grafts harvested with this technique.² We would like to share with the authors some thoughts and speculations based on evidence from the literature.

Three processes are responsible for vein graft failure: thrombosis, intimal hyperplasia, and accelerated atherosclerosis, which contribute to graft failure. Studies have shown that perioperative antiplatelet therapy can reduce early thrombosis and graft failure. The “no-touch” technique for harvesting grafts may be effective in preventing disruption to the endothelial layer and subsequent intimal hyperplasia and graft loss,³ but at least one apparent paradox has to be clarified about human saphenous vein vasa vasorum. This apparent paradox is based on the well-known fact that absence of vasa vasorum is a probable protection against intramyocardial arteries and left thoracic artery atherosclerosis.

Recent evidence has shown no clinical disadvantages, and even advantages, of not replacing angiographically pristine grafts at long-term follow-up. Measurements of nitric oxide release of old saphenous vein grafts, when angiographically pristine, are equal to that

of native saphenous veins. These findings support the recent clinical observations that long-term angiographically disease-free vein grafts are biologically privileged.⁴

The vasa vasorum form a network of microvasculature to supply oxygen and nutrients to the outer layers of the arterial wall. The expansion of the vasa vasorum to the second order is associated with neovascularization related to progression of atherosclerosis. It was shown that, when arterial grafts are used in coronary bypass surgery (eg, internal thoracic artery and right gastroepiploic artery), the poorly developed vasa vasorum is related to better patency.⁵ However, in saphenous vein graft, the preservation of vasa vasorum can be associated with reduction of graft failure.^{1,2} As already mentioned, is this fact a paradox or are there functional differences between arteries and veins? In other words, the presence of vasa vasorum in arteries “facilitates” atherosclerosis and, on the other hand, its presence “protects” against the same process of atherosclerosis? That would be an important point to be investigated.

There are histologic and image studies showing the human saphenous structures preservation by using the “no-touch” harvesting. In dealing with studies on the patency of saphenous vein, Dashwood and colleagues² provided interesting information about increasing the human saphenous vein graft patency in the long-term. However, the number of patients studied is small and large trials are still needed to prove the superiority of grafts harvested by the no-touch technique.

The discussion on human saphenous vein harvesting can repeat the internal thoracic artery skeletonization saga. In the end, the results of coronary artery bypass grafting with saphenous veins would be similar. It is necessary to emphasize an important salutary bias toward the “no-touch” technique, which in principle implies obsessive care in harvesting the veins.

The end question is, independently of the harvesting technique, are there segments of “biologically privileged” vein that randomly will have a good outcome in the long term?

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IS SLIDE TRACHEOPLASTY ALONE ENOUGH TO IMPROVE THE SURGICAL OUTCOME?

To the Editor:

We read with interest the report by Manning and colleagues¹ on the series of 80 patients with congenital tracheal stenosis undergoing slide tracheoplasty (STP).

They conclude that STP, with the use of cardiopulmonary bypass, is a safe and reliable technique associated with low morbidity and mortality. The title itself underlines the fact that this technique is also pliable because it could also be used with extreme anatomic variants.² As reported by Manning and colleagues,¹ the age range of patients undergoing STP can vary from a few days of life to several years, mainly

because tracheal stenosis can occur alone or associated with other anomalies (eg, cardiac, extracardiac, chromosomal) that could precipitate the symptomatology and anticipate the clinical presentation. When the tracheal stenosis is isolated, there are different anatomic variants, such as abnormal bronchial arborization or functional single lungs, that can complicate the preoperative management by requiring mechanical ventilation (27.5%,¹ up to 66%³) and sometimes preoperative extracorporeal membrane oxygenation to sustain the hemodynamics.

The use of cardiopulmonary bypass also is routinely used in our center in patients with isolated tracheal stenosis in whom the diameter of the trachea can be as narrow as 1 or 2 mm and conventional endotracheal tubes cannot fit.

The pliability of STP allows the surgeon to extend the incision into one of the bronchi when the stenosis involves segments distal to the carina.² However, in the series reported by Manning and colleagues,¹ the involvement of the bronchi in the STP has not been reported. We believe that when a stenosis involves the bronchi, this must be repaired along with the trachea.

STP has currently proved its reliability with a better surgical outcome and lower complication rate when compared with the other techniques.

We disagree with Manning and colleagues’¹ statement that the STP itself is “largely responsible” for their excellent results.

As reported by our institution, the management of these complex patients is multilevel, and intensivists, surgeons, interventional radiologists, pneumonologists, and cardiologists are equally involved. For this reason, we introduced multidisciplinary management with a significant improvement of outcome.⁴

As Manning and colleagues¹ report, 42.5% of the patients (34/80) required at least 1 additional airway intervention, including tracheal dilatation,

stenting, or reoperation. This indicates that STP alone does not always work, because there is still the need for further interventions to achieve an acceptable result.

We believe the management of patients throughout the follow-up period is a key point that must not be forgotten. A better understanding of the mid- and long-term effects of tracheal surgery, such as the function of the airway mucosa or the lung, and above all on the quality of life, will be necessary to achieve a thorough understanding of this very select population.

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LATE MORTALITY IN OFF-PUMP VERSUS ON-PUMP CORONARY ARTERY BYPASS GRAFTING: A META-ANALYSIS OF PROPENSITY SCORE-ADJUSTED STUDIES

To the Editor:

We read with great interest the systematic review and meta-analysis by Kuss and associates¹ of propensity score analyses, which found on-pump coronary artery bypass grafting (CABG) superior to on-pump CABG