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INVITED COMMENTARY

Procurement professionalization: a mandatory step to improve the availability and quality of whole pancreas grafts

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The lack of available organs remains one of the main limitations in the field of solid organ transplantation. Most transplant organizations work on improving donation rate through public information programs, and by exploring new organ sources, such as donors after cardiocirculatory death (DCD).

The impact of technical issues during organ procurement remains underexplored. A significant technical problem in a single donor can compromise the organ procurement and potentially jeopardize multiple transplantations. This is especially true for the pancreas, which is associated with the highest rate of technical failure [1].

In their report "Professionalization of surgical abdominal organ recovery leading to an increase in pancreatic allografts accepted for transplantation in The Netherlands: A serial analysis," Lam *et al.* describe the impact on pancreas transplantation of the new Dutch policy, aiming at improving the expertise of procurement surgeons.

Worldwide, most procurements are performed by training fellows. Senior fellows often supervise the training in organ procurement, and junior fellows are expected to become independent and operational as fast as possible. However, procuring organs is one of the most challenging procedures: One often has to work in remote hospitals, sometimes in a foreign language, with unfamiliar material. The procedure itself is complex and can be stressful, and the surgeon can also face important decisions such as "is the quality of this organ acceptable for transplantation?".

In the particular case of the pancreas, the dissection involves several major vessels, the organ is very sensitive to excessive manipulation—even when considered for islets transplantation [2]—and the scarcity of potential pancreas donors renders this surgery somewhat unusual. As a consequence, many fellows will not have the opportunity of being exposed to pancreas procurements on a regular basis before being sent for a procurement on their own.

Some adverse events can be anticipated from these considerations:

1 Technical mistakes because of the lack of experience can be the source of parenchymal or vascular injuries.

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2 Excessive manipulation by an unexperienced training surgeon may increase the risk of ischemic/reperfusion injury and technical failure.

3 For the procuring team, in case of uncertainty about the transplantability of the pancreas, risk aversion attitudes may lead to turning down a suitable organ [3]. Even if the pancreas can be assessed on the backtable, part of the assessment should be performed in the donor (color, fatty infiltration, presence of other non-surgical injuries of the retroperitoneum, etc.).

4 For the transplant surgeon, an inexperienced procurement team can be a source of distrust about the organ quality.

Lam *et al.* explore the rate of pancreas damage during the procurement, after the implementation in the Netherlands of a mandatory training for procuring surgeons.

This training includes not only a theoretical part, but junior procuring surgeons also have to perform a minimum of 10 procurements supervised by a senior procuring surgeon before being allowed to recover an organ independently. The authors compare the Dutch policy to the training of the American Society of Transplant Surgeons (ASTS), where a minimum number of 25 procurements are required for certification [4].

In fact, the ASTS minimum number of multi-organ procurements is set for the accreditation of transplant surgeon, but not for being sent alone on a procurement; most fellows are probably sent out on their own before receiving accreditation.

This aspect is certainly a strong element of the Dutch certification: a comprehensive practical training including a workshop and a prolonged tight supervision.

In their study, Lam *et al.* [5] showed that pancreases procured by certified surgeons presented fewer injuries and were more frequently transplanted, despite more challenging procurements in the certified surgeon group. Although some reported improvements in the certified group were short of statistical evidence, it is obvious that such a policy improved the overall pancreas transplantability.

In the current context of organ shortage, we must give our full attention to each step leading to transplantation. The "Professionalization of surgical abdominal organ recovery" is a mandatory step toward a better management of a scarce resource.

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