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| --- | --- |
| Q1 | Do you perform kidney transplantations? |
|  | * Yes, weekly * Yes, occasionally * Yes, monthly * No, not at all |
| Q2 | What is your country of residency? |
| Q3 | In which hospital are you currently working as a transplant surgeon? |
| Q4 | How many kidney transplant have you performed in your career as a transplant surgeon/urologist? |
|  | * <100 * 100-300 * 300-600 * >600 |
| Q5 | Did you receive specialty training in vascular surgery? |
|  | * Yes * No |
| Q6 | How many kidney transplants are yearly being performed in the center you are currently working at? |
|  | * <100 * 100-200 * 200-300 * >300 |
| Q7 | Protocols exist for vascular screening in kidney transplant recipients with possible aorto-iliac vascular disease, but these may differ per hospital. In addition, specific issues for the potential kidney transplant recipient may need to be addressed.  Are protocols in place at your hospital that state when to perform pre-transplantation imaging of the iliac arteries? |
|  | * There is no specific protocol * Vascular screening is done per protocol for patients above a certain age. Age: ………. * Vascular screening is performed solely in potential recipients with risk factors for vascular disease (e.g. smoking, long hemodialysis treatment, diabetes) * Selection of criteria and imaging technique is up to the individual transplant professional * Other: ………. |
| Q8 | You decide to perform pre-transplantation imaging of the iliac arteries to investigate if aorto-iliac vascular disease is present.  What is the preferred type of imaging? It is possible to select multiple imaging techniques. |
|  | * Pelvic X-ray * Contrast enhanced CT-scan * Non-contrast enhanced CT-scan * Duplex ultrasonography * Duplex ultrasonography combined with a CT-scan * Duplex ultrasonography combined with magnetic resonance angiography (MRA) * Magnetic resonance angiography (MRA) * Angiography * Other: ………. |
| Q9 | What are important concerns for you when considering a kidney transplant in a patient with severe aorto-iliac calcification? Rank in order of importance using drag and drop. |
|  | * Increased operative risk due to cardiovascular comorbidity * Technical problems when performing the vascular anastomosis * The ethical issue of transplanting a kidney into a patient with a lowered life expectancy |
| Q10 | Because of the scarcity of donor organs, the ethical issue of transplanting a valuable organ in a patient with a low life expectancy arises. There are no clear guidelines about this subject. What do you think should be the minimal life expectancy of a potential kidney transplant recipient, from an ethical perspective? |
|  | Living donor: 0-15 years  Deceased donor: 0-15 years |
| Q11 | How often is your center transplanting patients with aorto-iliac vascular disease who need a pre-transplantation intervention? (e.g. PTA with stenting, a vascular bypass or endarterectomy) |
|  | * None, we do not do that in our center * <10 per year * ≥10 per year |
| Q12 | If a patient needs an endovascular intervention to make him/her eligible for kidney transplantation, when is it ideally performed? |
|  | * Prior to kidney transplantation * Simultaneous with kidney transplantation * We do not do that in our center |
| Q13 | If a patient needs an open vascular intervention to make him/her eligible for kidney transplantation, when is it ideally performed? |
|  | * Prior to kidney transplantation * Simultaneous with kidney transplantation * We do not do that in our center |
| Q13\_1 | Displayed if Q13 = “Prior to kidney transplantation”  When is the open vascular intervention operation ideally performed in your center, if performed prior to a living donor kidney transplant? |
|  | * <6 months before * 6-12 months before * >1 year before * There are no guidelines |
| Q14 | Case 1  A 59-year old man is referred to the transplant center for assessment of transplantability. He wishes to receive a living unrelated kidney transplant from his partner. His medical history reveals diabetes mellitus type I, hypertension, and a cerebrovascular accident. He quit smoking after 30 pack years. Two months before he came to the outpatient clinic, he received a coronary artery bypass grafting because of complaints of angina. He received hemodialysis for 4 months after which he started continuous ambulatory peritoneal dialysis. The cardiologist cleared him for surgery. He has no complaints of claudication. He uses aspirin as anticoagulant.  Would you perform imaging in this patient, based on the information provided above? |
|  | * No * Yes, independent of the results of physical examination * It depends on the results of physical examination |
| Q15 | Physical examination reveals absent femoral pulsations on both sides.  You decide to perform a contrast-enhanced CT-scan, which is shown below in the video. If you are participating in the survey on your mobile phone, please tap below for the video to play:  Video 1  The radiology report is as following:  Right iliac arteries: very extensive atherosclerosis with a significant stenosis of the external iliac artery at the origin of the internal iliac artery, stenosis/possible occlusion of the proximal external iliac artery.  Left iliac arteries: very extensive atherosclerosis with a significant stenosis/possible occlusion of the distal external iliac artery.  Would you consider this patient eligible for kidney transplantation and, if so, where would you transplant the kidney? |
|  | * Yes, I would consider PTA with stenting to make this patient eligible for kidney transplantation * Yes, I would consider an endarterectomy/vascular bypass to make this patient eligible for kidney transplantation * Yes, I would consider the left iliac fossa without additional vascular procedure * Yes, I would consider the right iliac fossa without additional vascular procedure * No, I would reject this patient for kidney transplantation * No, I would consider a second opinion/refer to another transplant center * Other: ………. |
| Q15\_1 | Displayed if Q15 = “Yes” or “Other”  The aorto-iliac vascular disease of this patient can be classified with the TASC II classification. According to this classification, this patient has TASC D aorto-iliac vascular disease, which is the most severe category of aorto-iliac vascular disease.  The survival curve of 7 patients transplanted with TASC D lesions, based on our own data, is shown in this Kaplan Meier curve below:  Figure S2a  Would this change your decision to transplant this patient? |
|  | * No, I would still consider the patient not eligible for kidney transplantation * Yes, I would now consider kidney transplantation * I would consider a second opinion |
| Q16 | Case 2  A 67-year old man is referred to your outpatient clinic for assessment of transplantability. He has end-stage renal disease caused by diabetes mellitus type II. Besides his end-stage renal disease, his history also reveals hypertension, coronary artery disease, 2x transient ischemic attack. Both nephrologist and cardiologist cleared him for surgery. He smoked 20 pack years.  At your outpatient clinic, he has weak femoral pulsations on both sides. He complains about pain in his legs with a maximum walking distance of 160 meter. You decide to perform a contrast-enhanced CT-scan to see, if there is aorto-iliac vascular disease present, which is shown below. Please tap below for the video to play:  Video 2  The radiology report is as following:  Right iliac arteries: significant stenosis of the origin of the common iliac artery and external iliac artery. Left iliac arteries: significant stenosis of the proximal common iliac artery  Would you consider this patient eligible for kidney transplantation and, if so, where would you transplant the kidney? |
|  | * Yes, I would consider PTA with stenting to make this patient eligible for kidney transplantation * Yes, I would consider an endarterectomy/vascular bypass to make this patient eligible for kidney transplantation * Yes, I would consider the left iliac fossa without additional vascular procedure * Yes, I would consider the right iliac fossa without additional vascular procedure * No, I would reject this patient for kidney transplantation * No, I would consider a second opinion/refer to another transplant center * Other: ………. |
| Q17 | ​According to the TASC II classification, this patient has TASC B aorto-iliac vascular disease.  The survival curve of 12 patients transplanted with TASC B lesions, based on our own data, is shown in this Kaplan Meier curve below:  Figure S2b  The difference between patients without TASC II lesions and patients with TASC II B lesions is statistically different (log-rank test: p-value <0.001).  Death-censored graft survival is similar in both groups. |
| Q17\_1 | Displayed if Q16= “No”  Would this change your decision? |
|  | * No, I would still consider the patient not eligible for kidney transplantation * Yes, I would now consider kidney transplantation * I would consider a second opinion |
| Q17\_2 | Displayed if Q16 = “Yes” or “Other”  Would this change your decision? |
|  | * No, I would still consider the patient eligible for kidney transplantation * Yes, I would reject this patient because of the high mortality * I would consider a second opinion |
| Q18 | Feedback |

**Table S1.** The complete survey