Addendum 32: Recipient Contraindications to Kidney Transplantation

Absolute

The following are conditions relating to the kidney recipient candidate that constitute absolute contraindications to kidney transplantation. As such, they prevent a transplant from being done until the condition is resolved.

1) Positive CDC-AHG crossmatch

    a. A positive CDC-AHG crossmatch between the donor and recipient is a contraindication to transplantation because of the increased risk of hyperacute rejection. Consideration should be given to a pre-transplant conditioning protocol (involving recipient plasmapheresis), which could convert the CDC-AHG crossmatch to negative, and eliminate this contraindication.

2) Non-compliance

    a. Convincing evidence that the recipient will be non-compliant with the recommendations of the transplant team afterwards is a contraindication because non-compliance will cause failure of the kidney from rejection. Patients with a history of non-compliance, or substance abuse, should be carefully screened before transplant.

    b. Patients currently serving time for a criminal conviction, either imprisoned, on house arrest, and/or pending sentencing. These patients will require lifetime immunosuppression, intense monitoring and specialized health maintenance, and due to their environmental constraints will be unable to maintain the proper care of their transplant.

3) Serious active infection

    a. Postoperative immunosuppressants would make it more difficult to eradicate a serious active infection that is present at the time of transplant, and could potentially threaten the recipient's ability to recover from the procedure. Therefore, active serious infection is a contraindication to transplantation. Examples include infections such as peritonitis, osteomyelitis, pneumonia, hemodialysis graft infection, tuberculosis, etc.

4) Active malignancy under treatment

    a. Patients with an active malignancy still under treatment are excluded from transplantation until such time as it is very unlikely that there is any residual cancer, and the patient is thought to be cured. The time interval between treatment and transplantation depends on the type, stage, and grade of cancer, and the type of treatment given.

5) Inadequate financial resources

    a. Patients with inadequate or poorly defined financial resources may be unable to obtain the expensive medications and treatments needed to prevent failure of the transplant. If there is an unacceptably high risk of premature graft failure on this basis, the transplant should not be performed.

6) Certain severe, uncontrollable medical problems

    a. Certain medical problems are contraindications when they are severe, and not amenable to improvement. In this case, the condition could sharply limit the recipient's life expectancy regardless of whether a transplant is done, and would reduce the chances of survival after transplant surgery. Examples include severe, uncontrollable heart disease, lung disease, liver disease, and mental illness.

7) Pregnancy

    a. Pregnant women are not transplant candidates. A suitable period of time should elapse after delivery before transplantation.

Relative

The following are conditions relating to the kidney recipient candidate that constitute relative contraindications to kidney transplantation. As such they require, at minimum, resolution through one of the team transplant physicians. In many cases these issues would prompt further investigation or testing, or disposition by the Kidney, Pancreas Recipient Screening Committee.

1) Blood-type incompatibility

    a. In general, donor-recipient blood type incompatibility is a contraindication to kidney transplantation.

    b. Consideration can be given to a blood type incompatible live donor kidney transplant under a special protocol requiring pre-transplant plasmapheresis when there are no other live kidney donors available. Blood type incompatibility between a cadaver donor and recipient is a contraindication as no special protocols are currently in place for this situation.

2) Old age

    a. There is no firm upper limit cut-off for kidney transplantation, although the number of recipients over age 65 is relatively small. Older recipients are known to be at higher risk for post transplant complications, resulting in longer hospitalization, and greater risk of infectious or cardiovascular death.

    b. When considering candidacy of elderly recipients, close attention should be paid to intercurrent conditions that would increase the risk of morbidity and mortality beyond that attributable to old age alone. It is reasonable to exclude patients whose overall

condition places them at an excessive risk of postoperative morbidity, or who have a high likelihood of expiring within three years of a kidney transplant.

c. The following list of intercurrent conditions might increase an elderly patient's risk of postoperative morbidity and mortality. As a guideline, patients between the ages of 65 and 70 will be excluded if they have two or more of these conditions, whereas patients over the age of 70 could be excluded if they have one or more:

   i. Cardiac disease that places the recipient at intermediate to high risk for an adverse perioperative cardiac event

   ii. Longstanding diabetes with complications

   iii. Obesity (BMI over 35 kg/m^2)

   iv. Active cigarette smoking (within six months)

   v. Chronic obstructive pulmonary disease

   vi. Recurrent or recent stroke (within one year)

   vii. Inadequate long-term social support system

   viii. Poor functional status

3) History of heart disease

   a. When there is a possibility of heart disease in the recipient, this should be evaluated by special testing and/or cardiology consultation to ensure that the recipient is not at risk for suffering an adverse cardiac event during or after transplantation.

4) Marked obesity

   a. Recipients with a body mass index over 35 kg/m^2 are at increased risk of complications after kidney transplantation, including surgical complications, cardiovascular disease, delayed graft function, shorter graft survival, longer length of stay, higher costs, increased mortality, and higher incidence of post transplant diabetes mellitus. As a rule, recipients with a body mass index over 40 kg/m^2 should be excluded from transplantation until their weight drops below this cutoff. Exception to the rule can be made in some cases where the body mass index is between 35 and 45 kg/m^2 if the transplant surgeon determines that the candidate's body habitus is such that it does not constitute an increased surgical risk. In no case will patients with a body mass index over 45 kg/m^2 be accepted for transplantation.

   b. Body habitus and hygiene should be assessed by the transplant surgeon, as these may be mitigating factors in the decision to do the transplant.

c. The level of obesity, and presence of intercurrent conditions such as old age, cardiovascular disease, and diabetes should be weighed in the decision to perform a transplant in an obese patient.

5) A suspicion that the recipient will be non-compliant

    a. Recipients with a potential for non-compliance after transplantation should be screened with an interview with a transplant social worker. Further evaluation could include psychiatric consultation, consultation with the primary care provider or nephrologist of the patient, consultation with other health care professionals familiar with the patient (such as dialysis unit nurses), periodic blood testing for illicit drugs when indicated.

6) History of active substance abuse

    a. Active substance abuse is a risk factor for non-compliance. If a history of active substance abuse is elicited by the dialysis unit, social worker, coordinator or physician, then documentation of at least six months of documented abstinence is necessary before transplantation, with possible rehabilitation program documentation.

7) HIV infection

    a. While HIV infection was once considered an absolute contraindication to kidney transplantation, there are recent reports of excellent outcomes in selected patients. Kidney transplants can now be offered to selected HIV infected recipients under a special protocol.

8) HTLV infection

    a. Since the human T-cell leukemia virus is a risk factor for the development of leukemia and myelopathy after transplantation, persons with HTLV must be informed of this risk before transplant. Only those willing to accept this increased risk should be offered transplantation.

9) Positive flow cytometric crossmatch

    a. The flow cytometric crossmatch detects low levels of antibodies against the donor in the blood of the recipient. A positive flow crossmatch is not a strict contraindication to transplantation because it is not associated with an increased risk of graft loss due to hyperacute rejection. However, it may predict early acute rejection and premature graft failure from immunologic causes (positive T-cell flow crossmatch is more concerning that positive B-cell flow crossmatch). Caution should be used when transplanting across a positive flow crossmatch, especially if:

        i. T-cell (not just B-cell) crossmatch is positive

        ii. The recipient has had a prior transplant

10) Malignancy

a. Recipients should be free of active malignancy, and not be receiving treatment for malignancy.

b. In general, a two to five year waiting period after curative therapy for malignancy is recommended. This waiting period can be adjusted in individual cases dependent upon the estimated risk of recurrence, extent of disease at the time of treatment, type and grade of tumor, and the type of treatment given.

11) Viral hepatitis

a. Hepatitis B or C infection may be a contraindication to kidney transplantation, especially if there is evidence of active hepatitis or cirrhosis. Patients with quiescent disease and a benign liver biopsy can proceed with kidney transplantation, although treatment may be required in some.

12) Tuberculosis

a. A remote history of treated tuberculosis does not contraindicate transplantation. In cases where the history suggests that there may be a persistent subclinical tuberculosis infection, an consultation with an infectious disease expert may assist in the decision to treat the recipient for tuberculosis, and whether it can be done before or after the transplant.

13) Psychiatric disease

a. Patients with known or suspected psychiatric disease must have clearance from a social worker and/or psychiatrist to ensure that the recipient is competent, mature, mentally stable, able to comply with posttransplant medical recommendations, psychotropic medications, and necessary followup when indicated.

14) Multiple intercurrent conditions

a. Multiple medical problems, which individually may not contraindicate transplantation, could produce an aggregate effect in a transplant candidate that would pose an unacceptable risk for transplantation. An example would be an elderly patient (over age 65), with serious cardiac disease, perhaps with marked obesity, diabetes, or an extensive smoking history.

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