

The use of contaminated donor organs in transplantation

Zibari GB, Lipka J, Zizzi H, Abreo KD, Jacobbi L, McDonald JC.
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Clin Transplantation 2000; 14: 397-400. © Munksgaard, 2000

Abstract: Introduction. Organ transplantation has become an accepted means of treating end-stage organ disease in recent years with acceptable patient and graft survival. Transplant recipients have an increased risk of infectious complications due to multiple factors including decreased host resistance from chronic end-stage organ failure as well as from the immunosuppression required to prevent graft rejection.

Hypothesis. Therefore, the use of contaminated allografts could result in life-threatening infections in organ recipients.

Method. In this study, transplant patients receiving organs from donors with positive blood or urine cultures, from 1993 to 1997, were retrospectively reviewed.

Results. There was a total of 599 organ donors in our state. Forty-six (7.5%) had positive blood cultures and 25 (4.5%) had positive urine cultures. A total of 179 patients received organs from these contaminated donors, 36 of which were transplanted at our center. In this group, there were 16 kidney, 9 liver, and 11 heart transplants. Both donors and recipients received prophylactic broad-spectrum antibiotics, which were adjusted based on culture and sensitivity results. The most common organisms isolated from the blood were staphylococci followed by streptococci and Gram-negative organisms. Three of the 9 liver transplant patients in the series died with a mortality of 33%. Two of the 3 patients who died had sepsis but the responsible organisms were different from those recovered from the donor. The rest (66%) did well and have acceptable liver function. None of the 16 renal transplant recipients developed an infection and all survived. One patient developed acute irreversible rejection requiring transplant nephrectomy. There was one death in the heart transplant group resulting in a mortality of 9%. This death was not attributed to infectious processes.

Three of 11 heart transplant patients grew organisms in the post-operative period that were similar to those found in the corresponding donors. However, no patient suffered significant morbidity or mortality from these infections and all recovered. The recipients of contaminated organs had levels of organ function similar to those of randomly chosen recipients of non-contaminated organs, and both groups had similar lengths of hospital stay.

Conclusion. Only 3 of 36 organ recipients had infections caused by organisms found in the contaminated donor organs for a rate of 8%. Contaminated donor organs seem to fare as well as non-contaminated donor organs and there was no increase in morbidity or mortality. Contamination of organs should not be an absolute contraindication to the use of these organs in transplantation.

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Key words: antibiotics –
immunosuppression – infection – organ
donor – transplant complication

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Accepted for publication 25 February 2000

In recent years, organ transplantation has become an accepted means of treating end-stage organ disease because of improved patient and graft sur-

vival. Whereas improvements have occurred in immunosuppressive therapy, preservation solutions, anesthesia, operative techniques, ICU care, better