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The importance of donor blood culture in heart transplant patients: A case report

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Introduction

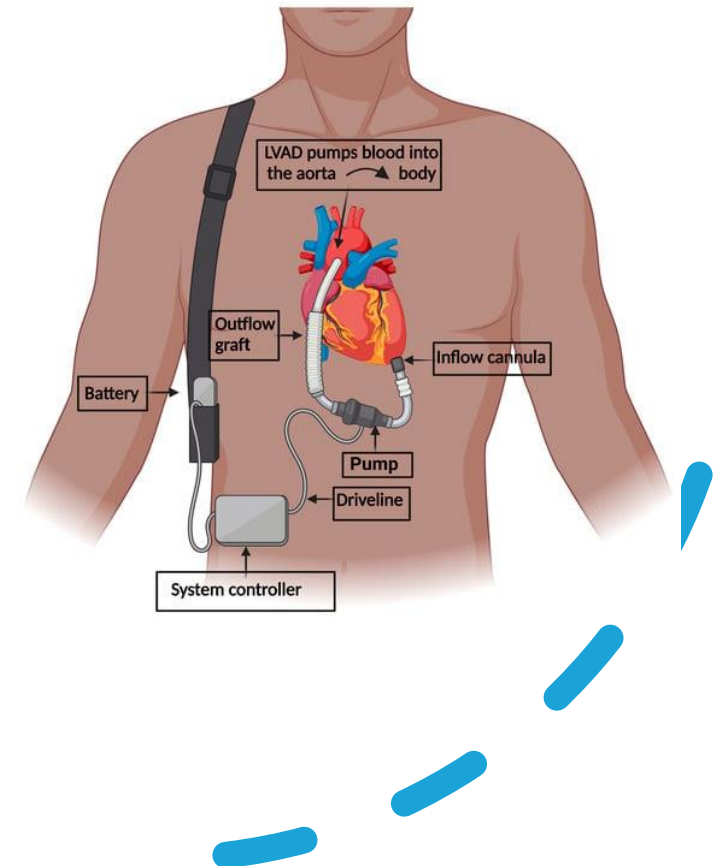
- Although rarely reported, **donor-transmitted bacterial infection** is a serious complication after heart transplantation.
- Due to organ shortage, nonbacteremic localized infections are not considered an obstacle for transplantation in many centers.
- Here a recipient who was followed up with donor-derived extended spectrum resistant (XDR) *Klebsiella pneumoniae* bacteremia after heart transplantation is presented.



Case-

Recipient

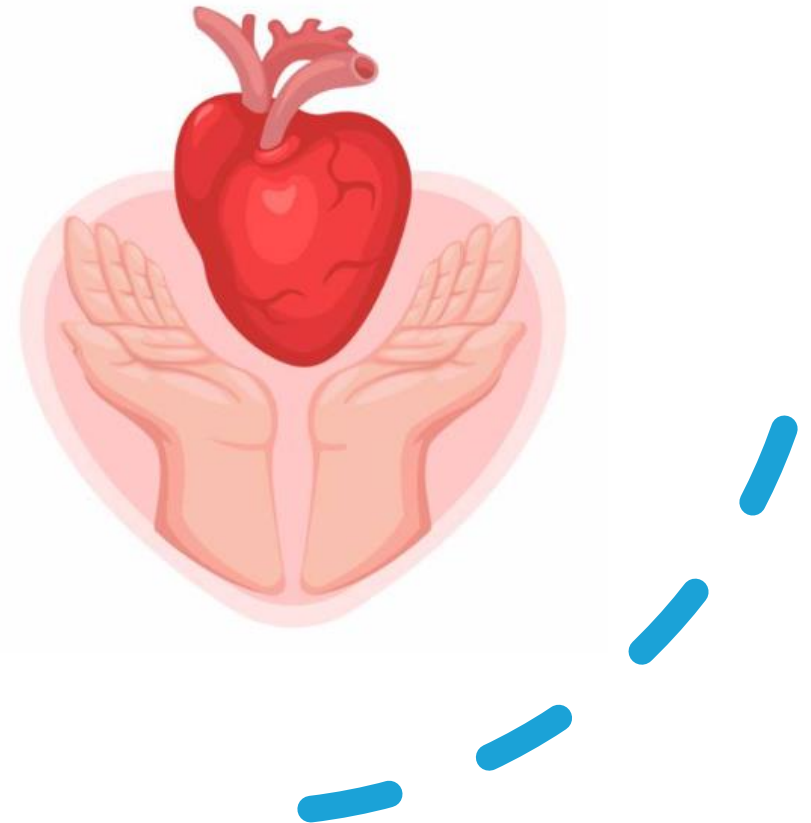
- A 50-year-old man
 - followed up with a left ventricular assist device (LVAD) since 2020 for dilated cardiomyopathy
 - hospitalized on 28/12/23 due to possible infective endocarditis caused by *Staphylococcus haemolyticus*.
- While the patient was on cefazolin treatment, heart transplantation was performed on 18/01/24.



Case

Donor:

- A 48-year-old man without known comorbidities.
 - followed up in the intensive care unit (ICU) of another hospital in the same city for 17 days
 - because of traumatic subarachnoid hemorrhage and
 - he was intubated.
- On the organ procurement day he was
 - receiving piperacillin tazobactam treatment for 5 days empirically because of subfebrile fever and CRP elevation (11mg/L to 88mg/L)
 - but blood, urine and tracheal aspirate cultures taken from him were negative during this period.



Case

- After the transplantation the recipient
 - had fever at the 3th day
 - XDR Klebsiella pneumoniae was isolated from blood cultures at the 5th day
 - Recieved colistin and meropenem
- It was learned that XDR Klebsiella pneumoniae was isolated from blood cultures taken from donor at the day of organ procurement.
- Simultaneous bacteremia was detected in the donor's other organ recipients (two kidneys and one liver).
- Recipient gave late response to antibacterial treatment and blood cultures revealed no growth taken on the 28th day of treatment
- It's also learned that the other recipients recovered.



Conclusion

- Pretransplant screening of donors are essential for organ transplantation. On the other hand it is not possible to rule out bacterial infections particularly from deceased donors who are treated in ICU.
- Here a serious bacterial infection transmitted to 4 recipients from a donor with an undocumented infection is presented.
- It is intended to emphasize that donor candidate receiving ICU treatment should be evaluated more detailed.
- The importance of cultures (particularly) blood cultures taken immediately before organ harvesting, has been demonstrated once again.



Thank you...

