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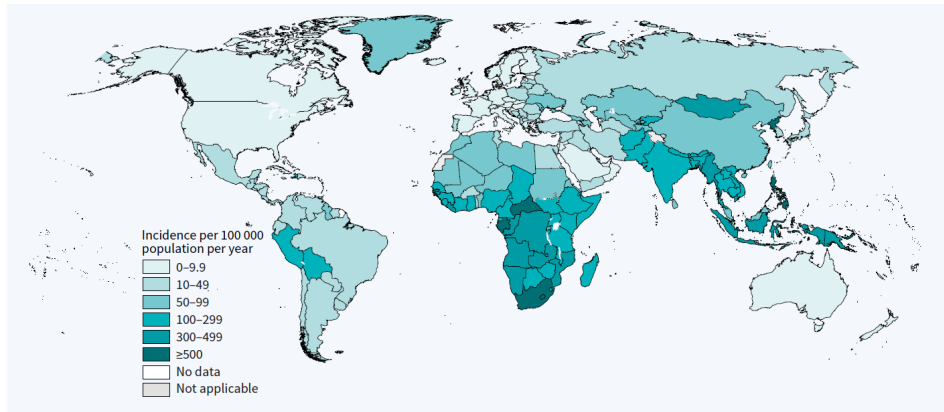
Kidney and liver transplant recipients with donor-derived tuberculosis: case report and literature review

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Tuberculosis - Global Prevalence and Impact on Transplantation

Estimated TB incidence rates, 2021



Risk of TB in solid organ recipients: 74% higher than in the general population.

Donor-derived infection: impact on morbidity and mortality after transplantation.

High global prevalence and elevated death rate without treatment.

Characteristics of Donor and Recipients

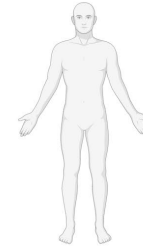
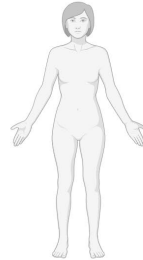
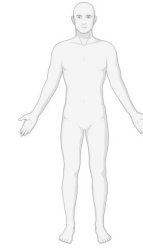
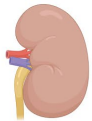
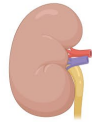
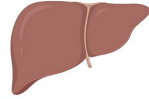
28 years old

Fever and
headache

Cerebrospinal fluid:
absence of bacteria at
Gram's stain, negative
acid-fast bacile on the
Ziehl-Neelsen stain.

Diffuse cerebral edema
and brain death on the 7th
day after admission.

Four weeks after donation:
M. tuberculosis was detected on the
cerebrospinal fluid culture.



59 years old
Cirrhosis due to HCV infection and
hepatocellular carcinoma

55 years old
CKD due to systemic hypertension

58 years old
CKD due to systemic hypertension

Liver Transplant Recipient



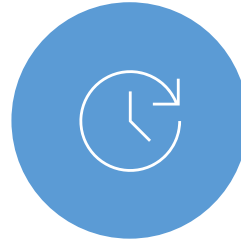
Pre-reperfusion liver biopsy: granulomatous hepatitis with no acid-fast bacilli on the Ziehl-Neelsen stain or fungus, and it suggested sarcoidosis.



Post-transplant liver biopsy: positive TB molecular test, exuberant chronic inflammatory reaction on the parenchyma with numerous non-caseating epithelioid granulomas, and positive acid-fast bacilli on the Ziehl-Neelsen stain.



Treatment: rifampin, isoniazid, pyrazinamide, and ethambutol for 9 months.



Complete resolution of the TB infection, with maintenance of graft function during the four-year follow-up.

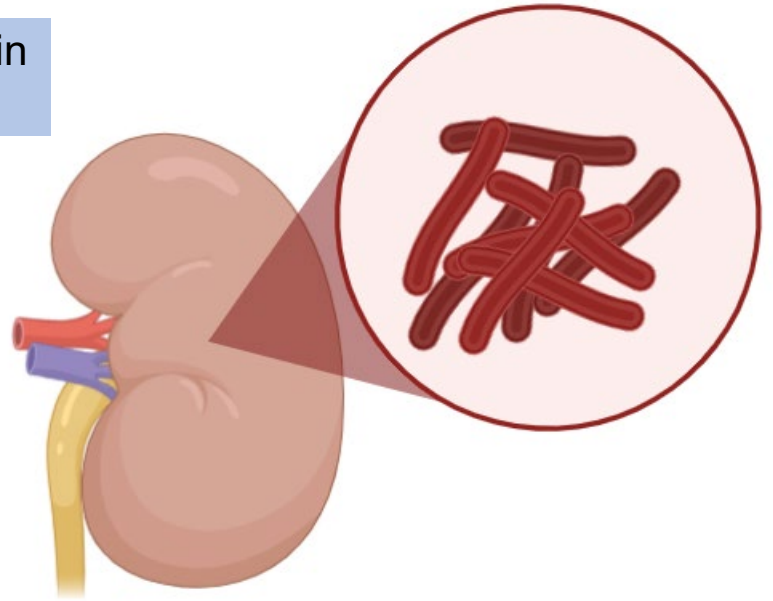
Kidney Transplant Recipients

Both presented asymptomatic leukocyturia within the first month post-transplant.

Urinary tuberculosis infection was confirmed by rapid molecular assay.

Treatment: rifampin, isoniazid, pyrazinamide, and ethambutol for 9 months.

Complete resolution of the TB infection and maintenance of graft function during the 4-year follow-up.



Conclusions

The main strategy to minimize the risk of donor-derived TB transmission is to identify high-risk donors

The presence of active TB infection is considered a contraindication to the donation once the risk of transmission is around 30%.

Organs from donors with a past of successfully treated TB can be transplanted, and LTBI without evidence of an active infection does not contraindicate the donation.

The most common screening protocols are based on medical history, epidemiological characteristics, and radiograph findings

Screening for TB in potential transplant recipients is essential since immunosuppressive treatment can influence the body's response to infection.