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**EXPERIMENTAL MODEL OF *CORYNEBACTERIUM RENALE*
PYELONEPHRITIS PRODUCED IN MICE**

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Pyelonephritis due to *Corynebacterium renale* in cows is known to be caused by the penetration of the organisms from the lower urinary passages. A model of the retrograde infection of *C. renale* has not been made in experimental animals. In the present study, a retrograde infection was produced by inoculating *C. renale* into the urinary bladder of mice, and it was compared with the disease in cows.

C. renale type I, 1.7 to 4.5×10^7 organisms, inoculated intravenously into mice disappeared from the blood less than 24 h after inoculation, and did not produce pyelonephritis.

The same strain, 1 to 5×10^7 organisms, introduced into the urinary bladder of mice was not recovered from the blood in any of the mice, but caused pyelonephritis accompanied by ureteritis and cystitis in 16 out of 21 (76%) mice. Pyelonephritis and cystitis in mice were histopathologically similar to those found in cows. The antibody response was observed only in the mice with pyelonephritis or pyelitis, but not in those with only cystitis or in those without lesions, as were found in cows. Similar diseases were produced in mice by *C. renale* types II and III, but less frequently than by type I. It is suggested, therefore, that mice may be useful in the study of bovine *C. renale* infection.