MEDICINE

Girl Receives 3rd Kidney

Kidney transplants are more likely to be successful the second, or third, time around—By Faye Marley

➤ THE CHANCES of surviving a second, and possibly a third kidney transplant are better than surviving the first. The reason is that the system gets more accustomed to the "foreign invader" that is often rejected.

"We have had one little girl who has survived a third kidney transplant at the Medical College of Virginia," Dr. David M. Hume told SCIENCE SERVICE. "Although we can say that a second transplant is much more likely to succeed than the first, we have had only the one patient with a third transplant and have no basis of comparison."

The child's first kidney was donated by her father, and the other two were from cadavers. She has been living 19 months from the date of the first transplant.

Sixty-nine patients are still living after transplants over the four-year period from 1962-1966 at the College.

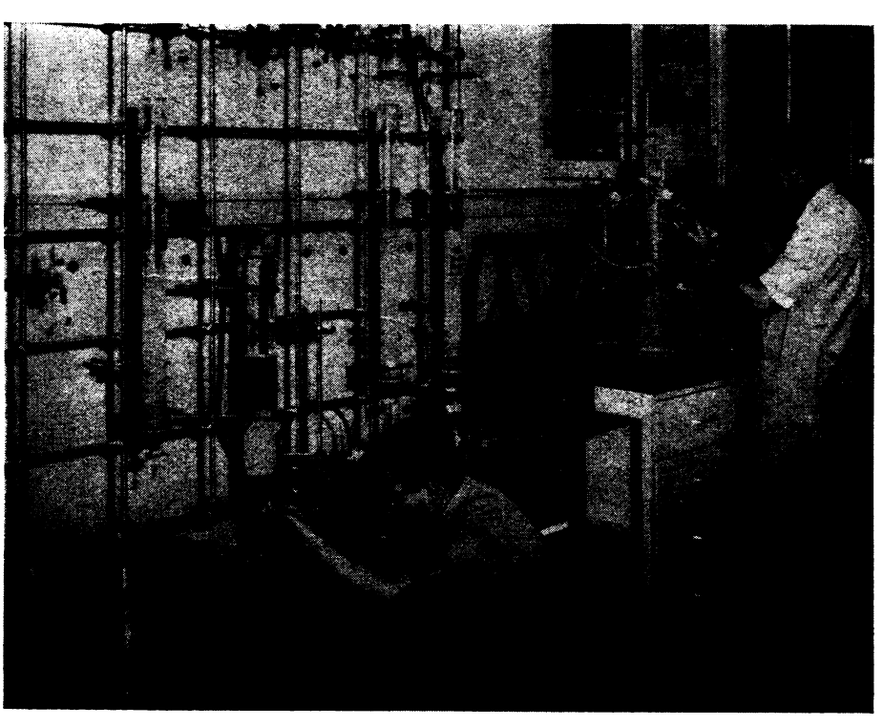
"We have transplanted 108 kidneys altogether in 98 patients," Dr. Hume said. "The longest survival time has been four years."

Dr. Hume participated in a symposium on transplantation at the Third International Congress of Nephrology in Washington, D.C. The transplants (from related living donors and from cadavers) were among non-twins, and comparisons were made on duration of excellent kidney function rather than patient survival time.

Good function was maintained for three years or more in 58% of the related living donor organs, but for only 30 months in 41% of the cadaver kidneys. Signs and events occurring within weeks of transplantation enabled the researchers to predict the long-term fate of the transplant, whatever its origin.

If the transplant undergoes a rejection crisis during the first week, or if rejection crises occurring during the first four months, are severe enough to require the use of an artificial kidney, the odds that the transplant will continue to function beyond one year are practically zero. If no crises occur during the first four months, however, prospects are excellent for continued good function for periods up to three and a half years.

Predictions between these two extremes can be based on whether or not rejection crises, however severe, can be brought under control within 30 days.



American Tobacco

TOBACCO RESEARCH—Laboratory technicians at the American Tobacco Company, Richmond, Va., separate tobacco pigments by filtering with a gel.

MEDICINE

Symptoms Seen Before Tumor Is Located

➤ DOCTORS are beginning to understand that certain types of cancers can produce general effects upon the health of a patient long before specific symptoms point to the location of the cancer.

These changes, mostly in the endocrine functions such as blood flow, arthritis and even skin diseases, seem to arise from the growth of a cancer in a site such as the lung which has no direct relationship to endocrine centers, Dr. Robert P. Barden, chief of radiology at the Chestnut Hill Hospital, Philadelphia, reported to the American Roentgen Ray Society, meeting in San Francisco.

"The concept of a specific intrinsic function of tumors which may produce systemic effects is new and exciting. It reflects the concern of modern medicine with the dynamic aspects of disease as opposed to the former attitude of anatomic identification," he said.

"For example, for some years now the diagnosis of carcinoma (cancer) of the lung has depended sometimes in detection of changes in pulmonary function long before the anatomical tumor could be demonstrated. Beyond this, one may encounter a local pulmonary tumor which reveals its presence by producing biochemical substances that influence profoundly the body as a whole, many months before the tumor itself is manifested," Dr. Barden said.

Besides contributing to the use of routine treatments in cancers detected earlier than usual, the evaluation of their "para-endocrine" activity may lead to eventual analysis of the chemical substances involved and the development of new methods for controlling cancer growths, he predicted.

Dr. Barden cautioned that many of the patterns of symptoms which might be caused by undetected cancers were very similar to patterns in other endocrine diseases. The suspicion that the pattern might be caused by a cancer should lead to an intensive diagnostic search. This could result in the detection of a small cancer which was overlooked in routine screening.

"In some instances, tumor secretions produce endocrinopathies which mimic primary endocrine diseases, such as Cushing's syndrome or hyperparathyroidism," he explained. "In others the para-endocrine effect of the tumor may produce disturbances in electrolytes, sugar metabolism, or blood clotting mechanism, reflecting fundamental derangements in biochemistry. A few tumors produce endocrine syndromes of their own, such as the symptoms of diarrhea, flushing and wheezing which occur with increased serontin production occurring in intestinal carcinoids or bronchial adenomas."