THE HOSPITAL NECKER CENTRE FOR RESEARCH INTO RENAL INSUFFICIENCY

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THE Hospital Necker Centre for Research into Renal Insufficiency was created in 1951. The hospital buildings are ancient (it was here that Laennec discovered auscultation) but the interior was entirely rearranged in 1954-1956 and modern constructions have been added to them. The centre comprises two closely associated parts, one being the hospital service belonging to the *Assistance Publique de Paris* and the other the research laboratories built and financed by the *Assistance Publique*, the *Association Claude Bernard*, the *Institut National d'Hygiène* and the *Centre National de la Recherche Scientifique*. It is devoted to the study of acute and chronic renal diseases and the relevant techniques for treatment.

The Hospital Service

This includes a male and female ward (48 beds in all). Those seriously ill have single rooms, the others are in small rooms with two to six beds. By the side of each bed is a point for oxygen and one for aspiration. The single rooms are designed to allow radiological examination of the patient in bed and the use, if required, of respirators.

The routine laboratories can carry out the biochemical, hæmatological and bacteriological investigations required on the spot, at any time.

An artificial kidney (Usifroid, Necker model) has been in use since 1955: 1,200 dialyses have been carried out in six years.

A urological room is set aside for endoscopy (cystoscopy, ureteric catheterization and retrograde pyelography).

The outpatient department is open every day, about 60 patients attending every week, all with renal disease. It includes facilities for preliminary investigations and for those which necessitate the patient lying down for some hours.

Two aseptic units for renal transplantation have been included in the Centre. Each comprises three communicating rooms, one for the patient, one for the nurse and one for the preparation of linen, medicaments and diet. These three rooms are supplied with air which has been conditioned,

pressurized and sterilized. Sources of ultra violet light allow continuous sterilization of the atmosphere. Thanks to these precautions, the bacterial growth of this atmosphere can be kept at less than 1% of that outside for periods as long as a month. The nursing teams have been specially trained to work in these aseptic units. When no transplantation is being carried out, the rooms of each unit can be made separate and are then used for the treatment of ordinary patients (Fig. 1).

The medical staff includes, besides the head of the service, three clinical assistants, three interns and 15 externs. A urological and an ophthalmological assistant are available for special consultations.

The cases treated are so serious that doctors trained in methods of emergency treatment must always be available: seven in rotation do daily duty. Two of the duty externs are there to help them all the time.

The teaching given in the Centre falls under two headings. Undergraduate teaching is given to 100 first-year students each year, by the staff of the service and in particular by four 'Chefs de clinique', for whom teaching is their sole activity. Postgraduate education is given in monthly therapeutic conferences, in a course in laboratory technique and on annual days devoted to renal problems.

Surveying the figures of cases treated from 1955 to 1960 conveys some idea of the work of the service: 4,800 patients were treated in this period of whom 1,491 had acute and 3,309 chronic renal disease (Tables 1 and 2).

The Research Laboratories

These are closely connected with the work of the hospital service, and are divided into six main departments:

The laboratory of pathological anatomy includes a section for light microscopy and one for electron microscopy, of the renal biopsies done in the service. The study of 520 biopsies done up to the present has dictated treatment. The actual

FIG. 1.—Plan of aseptic unit for renal transplantation.

research work is centred particularly on the nephrotic syndrome.

The biochemical laboratory is for the study of the proteins of normal and pathological renal tissue.

The immunological laboratory is working on the immunological aspects of certain experimental diseases (glomerulo-nephritis, interstitial nephritis) and clinical conditions, as well as on the antigenic structure of renal tissue.

The laboratory of experimental pathology is devoted to the analysis of the relationships existing between the kidney and hypertension as well as to problems connected with renal hæmodynamics.

A laboratory for research into renal transplantation has recently been created to analyse the factors controlling the compatibility of transplants.

An isotope laboratory has recently been installed.

These laboratories are staffed by 11 research workers and 20 technicians.

A library is at the disposal of the clinicians and research workers: 75 of the world's leading reviews are taken, covering internal medicine and renal pathology, physiology and physio-pathology.

TABLE I
ACUTE RENAL DISEASE, 1952-60

1. Acute tubular necrosis	908
Post-abortion	380
Toxic	113
Post-operative	96
Post-transfusion	95
Traumatic	58
Post-partum	46
Burns	12
Various	108
2. Acute and subacute glomerulo-nephritis	84
3. Acute interstitial nephritis	107
4. Acute vascular nephropathies	43
Renal infarct	20
Bilateral cortical necrosis	23
5. Functional renal insufficiency	169
6. Toxæmia of pregnancy	63
7. Various, unclassified	117
Total	1,491

TABLE 2
CHRONIC RENAL DISEASES, 1952-60

1. Chronic glomerulo-nephritis, including nephrotic syndrome and isolated proteinuria	577
2. Chronic renal disease occurring in systemic diseases	171
including Amyloid	67
SLE	19
Periarteritis nodosa	11
3. Chronic interstitial nephritis	458
including Pyelonephritis	440
4. Nephrosclerosis	514
5. Chronic renal tubular diseases	19
6. Polycystic kidneys	63
7. Congenital or acquired diseases of the urinary tracts	285
8. Calculi	182
9. Renal tuberculosis	198
10. Orthostatic proteinuria	292
11. Various, unclassified	550
Total	3,309