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Diameter measurements of urinary casts.

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Diameters of urinary casts in a number of pathological sediments have been measured and their frequency distributions studied. In most of the sediments measured the diameters range from about 8 microns to 40 or 50 microns, with a mean value of from 19 to 24 microns. Frequency polygons obtained from measurements of 100 to 300 casts grouped in class intervals of 3 microns are usually unimodal and slightly skew, with the long tail in the direction of the greater diameters. This asymmetry is probably due to the fact that very small casts are difficult of

Mean Value and Dispersion of Cast Diameters.

Case	Type of Renal Disease	Mean Diameter.	Standard Deviation
1	Hemorrhagic, initial	16 microns	4
2	Hemorrhagic, latent	19	7
3	Hemorrhagic, active	19	5
		20	6
4	Hemorrhagic, active	19	7
5	(Cardiac decompensation)	21	7
		20	6
6	Hemorrhagic, active	21	6
7	Hemorrhagic, latent	20	6
		20	6
		21	6
8	Hemorrhagic, latent	20	7
9	Hemorrhagic, active	20	5
		21	7
		23	6
10	Hemorrhagic, active	19	4
11	Cryptic, degenerative	22	7
12	Hemorrhagic, active	19	4
		23	6
13	Hemorrhagic, latent	24	7
14	Hemorrhagic, terminal	25	7
		28	9
15	Degenerative (jaundice)	31	15
		30	12
16	Hemorrhagic, terminal	35	13
17	Hemorrhagic, terminal	41	13
		42	14
18	Hemorrhagic, terminal	50	18

identification. A few of the sediments contained high percentages of broad "renal failure" casts described by Addis¹. Plots from these sediments show high mean diameters and high degrees of dispersion, but are not otherwise significantly different from the other curves. In general the dispersion increases with increasing mean diameter. The broadest casts seen measured 98 microns.

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Hereditary doubling suggesting anomalous chromatin distribution
in the mouse.

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Mice with six legs appeared about two years ago in a stock which had descended from five individuals and had been inbred for several generations. Since this stock had been subjected to no special treatment, the possibility of the anomaly having a purely hereditary basis suggested itself, and in the fall experiments were undertaken to determine if such were the case.

In the course of the tests many anomalous individuals have been produced ranging from Y-shaped specimens with four hind legs and two tails, to those with a relatively slight degree of doubling in the external genitalia. These may all be referred to as "doubles." Apparently connected with the same manifestation is the appearance of hemorrhagic testes, *spina bifida*, and occasional other anomalies such as microphthalmia. The anomalous individuals are for the most part incapacitated for breeding, so their parents and sibs have been isolated from the rest of the stock and used for the experiments.

At first anomalous individuals were produced about equally by the selected (D) and unrelated (B) strains, but gradually the former began to show an increased incidence which has risen to about 12 per cent (113:805) for the whole A strain and about

¹ Addis, Renal Failure Casts, *J. Am. Med. Assn.*, 1925, lxxxiv, 1013.