

of 2.0 gm. of heart per kilo body weight. Wassermeyer and Rohrbach³ quote Kuelb's average figure on a small series of normal domestic rabbits at 2.70 and Hesse's average figure of 2.70 on a similar series and their own figures on 10 rabbits with a maximum of 2.73 and a minimum of 2.03 and an average of 2.38 gm. of heart per kilo of body weight. Sekiguchi⁴ used as control his average of 2.04 gm. of heart per kilo of body weight obtained from the study of 10 normal rabbits.

In a series of 168 normal rabbits of Chinchilla, New Zealand, Red, White and Dutch Black strains and mixtures of these, with body weights varying from 900 to 3,000 gm. we have found the arithmetical mean of the HW/BW to be 1.972 gm. heart per kilo body weight, with a standard deviation of 0.299 and a probable error of ± 0.015 for the mean and ± 0.011 for the standard deviation. We also dissected 101 of these hearts in the fresh and divided them by the authors'⁵ midseptal method into auricles, left and right ventricular masses. The left to right ventricular ratios (L/R) mean was 1.792 with a standard deviation of 0.138 and probable errors of ± 0.0092 for the mean and ± 0.0065 for the S. D. The mean normal auricular weight body weight ratios were 0.270 with an S. D. of 0.054 and for the auricular weight heart weight ratios mean was found to be 137 ± 23 .

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Experimental Ablation of Posterior as Contrasted to Anterior Aortic Cusp on Cardiac Hypertrophy in the Rabbit.*

E. H. SCHWAB, GEORGE HERRMANN AND J. FRANK CONNALLY, JR.

From the Department of Medicine, University of Texas, Galveston.

During the progress of studies on the results of digitalization on experimental aortic insufficiency hypertrophy it was observed that the gross configuration of the hypertrophied heart appeared to differ. Some were globular in form whereas others were elongated or boot

³ Wassermeyer, H., and Rohrbach, A., *Arch. f. exp. Path. u. Pharm.*, 1932, **166**, 375.

⁴ Sekiguchi, R., *Ber. ges. Physiol.*, 1935, **87**, 1928.

⁵ Herrmann, George, *Am. Heart J.*, 1925, **1**, 485.

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TABLE I.
Cardiac Hypertrophy as Influenced by Location of Aortic Defect.

No. cases	HW/BW	L/R	A/BW	A/HW	Duration, wk.	Extent of lesion
Anterior Cusp.						
7	2.21	2.10	.305	137.	16	Small
8	2.21	1.86	.286	129.5	8	"
11	3.40	1.86	.535	164.5	12	Complete
21	3.70	2.30	.430	111.	15	"
22	2.07	1.88	.292	141.	16	Small
35	3.45	2.01	.467	135.	15	Complete
38	3.38	2.15	.423	125.	15	"
51	3.71	2.16	.577	156.	10	"
53	2.76	1.95	.256	93.	14	Moderate
62	2.29	1.73	.317	138.	9	Small
63	3.20	1.87	.360	111.	11	Moderate
64	2.55	1.76	.290	113.	10	"
66	3.05	1.83	.295	97.	14	"
67	4.68	1.94	.840	180.	14	Complete
74	2.72	1.80	.359	130.	13	Moderate
76	2.18	2.00	.273	125.	13	Small
Aver.	2.98	1.94	.394	130.		
Posterior Cusp.						
12	3.15	1.76	.520	165.	8	Complete
15	3.26	1.93	.474	145.	16	"
19	3.34	1.88	.380	113.	15	"
20	3.80	2.01	.369	97.	15	"
23	3.57	1.71	.500	140.	15	"
27	4.35	1.32	.835	192.	3	"
49	2.42	1.95	.246	101.	14	Moderate
72	4.28	1.84	.530	124.	13	Complete
77	3.53	1.29	.800	227.	2	"
78	2.85	1.84	.363	127.	13	"
79	4.10	1.69	.815	198.	12	"
117	3.07	1.53	.618	201.	2	"
Aver.	3.48	1.72	.537	157.		
Combined Lesion.						
34	4.37	1.94	.578	170.	15	Ant. complete + post. moderate
39	5.58	1.88	.727	130.	11	Post. complete + ant. moderate
42	3.14	1.72	.311	99.	15	Post. complete + ant. small
102	4.15	1.39	.810	195.	5	Post. complete + ant. small

shaped. The hearts were dissected by removal of the auricles and division of the ventricular mass by the midseptal method. It was found that the globular heart was associated with ablation of the posterior leaflet and the right ventricular wall appeared to be considerably thickened along with the increased mass of the left heart. The *coeur en sabot* type, on the other hand, was found occurring usually in those that had destruction of the left anterior cusp. In the latter group the thickness of the right ventricular wall did not appear to be conspicuously increased in thickness, while the left

ventricular wall was strikingly so. In a few hearts with combined lesions the configuration depended upon which leaflet damage was the more extensive. The obvious visual impression was substantiated by the weights of the ventricular masses and the ratios of these to one another as shown in Table I.

The hypertrophy of the auricles was observed to be greater in the hearts with posterior incompetency and the auricular body weight and the auricular heart weight ratios seem to confirm this. The heart weight body weight ratios show that the amount of total hypertrophy is almost uniformly greater in the hearts with posterior lesions. Difference in the intracardiac dynamics of the circulation with the two types of aortic regurgitation is the probable factor. A relative mitral stenosis (Austin Flint phenomenon) is a possible explanation of concomitant auricular and right ventricular hypertrophy in the presence of the regurgitation through the posterior sector.