a direct effect of a separate adrenotropic principle still contained in the prolactin (chiefly our No. 237) used in this study.

Summary. In adult (not senile) rats injected during 8 to 22 days with 10 or 20 units per day of prolactin the weights of testes were not diminished. By this dosage the weight of Cowper's glands are apparently decreased, and that of the adrenals increased. In relatively high dosage during similar periods follicle-stimulating hormone (+ some thyreotropic) and Prolan are found, confirming earlier work of others, to have almost negligible power to cause an increase of size in such testes. Prolan led to marked enlargement of the seminal vesicles and prostate, and in the heavy dosage used it was apparently adverse to body growth.

7744 C

Effect of Splenectomy and Other Operative Procedures on Platelets as Determined Volumetrically.

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An increase in the number of circulating thrombocytes has been observed following operations,[1, 2] parturition[1] and fractures,[3] but is greatest after splenectomy.[4, 5] This increase has been attributed to tissue injury[1] and in the case of splenectomy to additional factors.[6] The period of maximum increase coincides with that period in which post-operative thromboses are most likely to occur.

We have repeated the above observations using the volumetric method[7] of platelet determination, since this has proved to be more reliable in our experience than any method of counting and in addition indicates the amount of platelet substance present, rather than simply the number of platelets irrespective of their size. In normal subjects the platelets form from 0.4 to 0.6% of the whole blood volume.

[1] Dawbarn, R. Y., Earlham, F., Evan, W. H., *J. Path. and Bact.*, 1928, **31**, 833.
[2] Cramer, W., Bannerman, R. G., *Lancet*, 1921, **1**, 1048.
[3] Galloway, J. F., *Lancet*, 1931, **1**, 1082.
[4] Evans, W. H., *J. Path. and Bact.*, 1928, **31**, 815.
[5] Shore, B. R., and Kreidel, K. V., *Ann. Surg.*, 1934, **99**, 307.
[6] Krumbhaar, E. B., *Am. J. Med. Sc.*, 1932, **184**, 215.
[7] Van Allen, C. M., *J. Lab. Clin. Med.*, 1926, **12**, 282.

TABLE I

Showing the platelet determination prior to operation, the highest reading and the day on which this occurred in each case. The case numbers correspond to those in Figure I.

Splenectomy.					Postoperative and Postpartum.				
			Maximum rise					Maximum rise	
Case No.	Disease	Platelets	Platelets	Day	Case No.	Operation	Platelets	Platelets	Day
1	Familial hemolytic icterus	.5	2.25	13	1	Bone tumor	.45	.75	4
2	" " "	.6	3.6	15	2	Thyroidectomy	.60	.62	3
3	" " "	.3	3.1	9	3	Fistula-in-ano	.72	.75	1
4	" " "	.26	2.6	14	4	Carcinoma of rectum	.93	.70	2
5	" " "	.6	2.3	13	5	Thyroidectomy	.72	.69	4
6	" " "	.3	1.53	10	6	Mastectomy	.41	.94	13
7	Banti's syndrome	.45	2.27	10	7	Herniorrhaphy	.52	.91	3
8	" "	1.1	1.99	11	8	"	.47	1.17	9
9	" "	.16	1.93	19	9	Thyroidectomy	.44	.62	1
10	" "	.4	1.3	10	10	Hemorrhoidectomy	.52	.85	13
11	" " (luetic)	.2	1.8	15	11	Mastectomy	.48	.77	8
12	" "	.1	1.3	14	12	Skin graft	.63	.78	10
13	" "	.55	1.2	7	13	Exploratory laparotomy	.39	.75	9
14	Familial hemolytic icterus	.3	1.7	11	14	Appendectomy	.54	.73	6
15	Thrombocytopenic purpura	.28	1.44	12	15	Cholecystectomy	.57	.92	2
16	Sickle cell anemia	1.0	1.60	12	16	"	.47	.69	5
17	Felty's syndrome	.15	.3	6	17	"	.44	.83	17
					18	"	.88	1.82	10
	Average	.31	1.89	12	19	Postpartum	.45	.50	5
					20	"	.45	.46	3
					21	"	.44	.73	6
					22	"	.53	.53	8
					23	"	.48	.85	9
					24	"	.43	.76	9
						Average	.54	.79	6

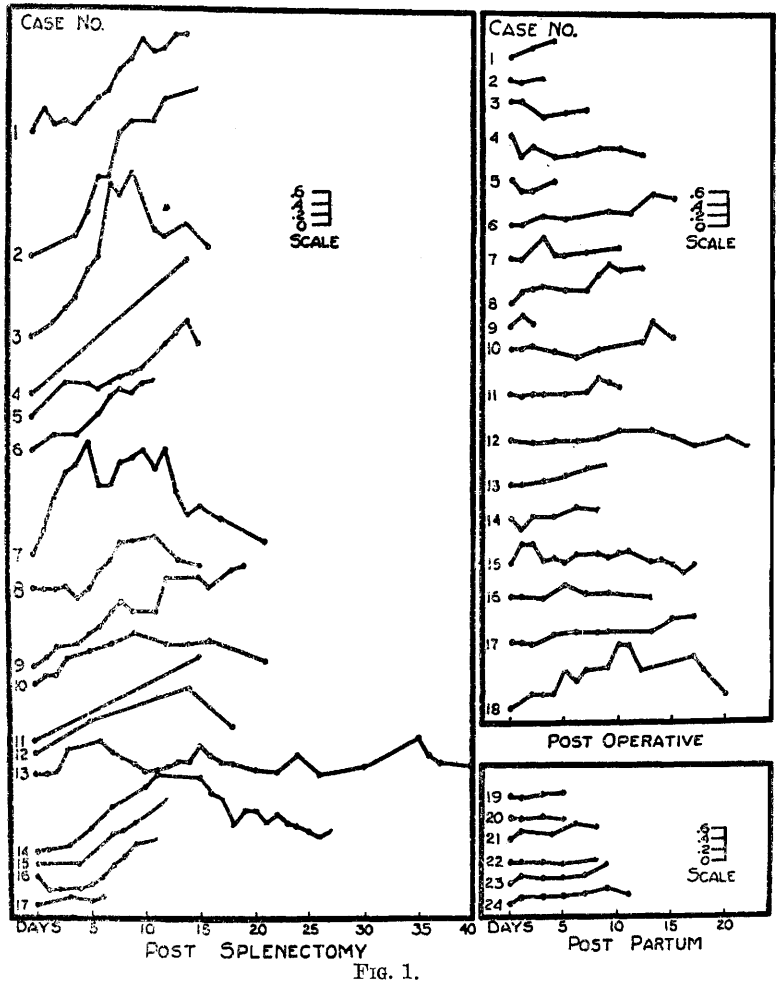

FIG. 1.
Platelets after operation.

Table I and Fig. 1 show that a variable but moderate increase in the platelets occurred following operations, while in the postpartum cases there was only a very slight rise. There was a striking increase after splenectomy although a considerable variation in the degree and rapidity of the rise was noted. One patient (Case 11) was followed intermittently for 3 years and at the end of this time the platelets were present in normal amounts. Only one splenectomized patient (Case 17) failed to show a noteworthy increase in platelets. This patient died of mesenteric thrombosis on the ninth post-operative day. Symptoms of this complication appeared on the seventh day while the last platelet determination, 24 hours previously, had shown no significant increase in these bodies.

These results correspond in general to those obtained by platelet counts and indicate that increase in the platelet volume is not the primary factor in post-operative thrombosis.

7745 C

Oestrin and Progestin Content of the Corpus Luteum of the Sow.

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The oestrin and progestin content of the corpus luteum of the sow was determined at various stages of development. Ovaries were obtained fresh from the abattoir and separated into the following groups: 1, early corpora lutea up to about the sixth or seventh day from the time of rupture of the Graafian follicle; 2, fully formed corpora lutea representing the various stages of early and middle pregnancy; 3, degenerating corpora lutea, and 4, corpora albicans. This separation does not take into account the correlation of the development of the egg and embryo, since the large amounts of ovaries were primarily for the preparation of progestin. However this macroscopic separation demonstrated that there is variation in the level of progestin which has physiological significance. Due care was taken in the dissection of each batch of corpora lutea that follicular fluid was not a contaminant.

Progestin and oestrin were prepared and separated according to the method of Allen.[1] The progestin content was determined according to the method of standardization of Corner and Allen.[2] The oestrin level was obtained by the vaginal smear test using castrated female rats. The number of rabbit units of progestin and the number of rat units of oestrin per 100 gm. of corpora lutea are recorded in Table I.

It is to be noted that the progestin content is highest during the

TABLE I.
Rabbit Units of Progestin and Rat Units of Oestrin per 100 gm. Corpora Lutea.

Batch No.	1	2	3	4
Rb. U. Progestin	4.1	3.1	1.6	less than ¼
R. U. Oestrin	2.7	3.4	3.0	1.3

[1] Allen, W. M., *J. Biol. Chem.*, 1932, **48**, 591.

[2] Corner, G. W., and Allen, W. M., *Am. J. Physiol.*, 1929, **88**, 326.