than the others. As might be expected, no patient treated with phenobarbital was believed to have the complete extrapyramidal syndrome. These effects were most frequent in the third week of treatment, at daily doses of 48 mg. of perphenazine, 75 mg. of prochlorperazine, 150 mg. of triflupromazine, and 600 mg. of chlorpromazine. Patients receiving phenobarbital reported as having akathisia probably reflected the difficulty in distinguishing this symptom-complex from the ordinary manifestations of psychosis. Similarly, an instance of dystonic syndrome with phenobarbital must have reflected an error in clinical judgment, as this syndrome is unique for phenothiazine derivatives.

As extrapyramidal syndromes are frequently said to correlate with clinical improvement, such a relationship was sought in the case of perphenazine and prochlorperazine. Substantial clinical improvement was arbitrarily defined as a reduction of 25 per cent or more from the initial total morbidity score (measured by the Multidimensional Scale for Rating Psychiatric Patients) at the end of 12 weeks of treatment. Any change less than this was considered insufficient improvement. These two categories of improvement were then grouped according to the presence or absence of extrapyramidal syndromes. No statistically significant differences were noted between groups showing substantial improvement and those not, either with or without extrapyramidal effects, in the case of either drug.

Although autonomic nervous system effects are not related to the pharmacologic action of phenobarbital, a surprising number were recorded. Presumably these represent normal variations in the state of the patients, rather than drug effects. They tended to occur later in the course than with the phenothiazine derivatives, which usually produced these effects immediately and at low doses.

Cases of dermatitis were too few to show much distinction between the drugs. The occurrence of this complication with phenobarbital was not surprising as allergic eruptions with barbiturates should be expected.

Changes in leukocyte and eosinophil counts. The occurrence of eosinophilia, leukocytosis, and leukopenia is shown in Table III. None of the differences between drug groups were statistically significant.

Eosinophilia was most frequently noted, being highest for phenobarbital (even when corrected for 2 abnormally elevated counts in the control period) and lowest with trifluprornazine. The total number of

Table IV. *Occurrence of abnormal hepatic tests during 12 week treatment period*

Drug	*Patients with abnormal tests*	*No. with 2 or more abnormal tests*	*Total serum bilirubin over 1.2 mg. %*	*SGO-T titer over 40 units*	*Alkaline phosphatase over 8 units (Bodansky)*	*Cephalin flocculation 3 plus or more in 48 hours*	*BSP retention over 8 per cent in 45 minutes*
Phenobarbital	20 (10)*	6 (5)	4	10	4	6	3
Chlorpromazine	19 (5)	3 (1)	4	9	5	5	0
Trifluprornazine	11 (2)	6 (2)	2	10	4	3	0
Mepazine	16 (8)	5 (3)	6	9	3	3	1
Prochlorperazine	17 (4)	3 (1)	0	11	6	1	2
Perphenazine	14 (7)	3 (1)	2	9	2	3	1
Total	97 (36)	26 (13)					
		Range of values	1.3-2.7 mg. per 101 ml.	40-177 units	8.2-14 units	3-4 plus	9-17%

*Numbers in parentheses indicate patients with abnormal control values.