

A summary of the investigator's global evaluations of the responses of the patients to drug treatment over the four-hour period is presented in Table XXXV.

Table XXXV  
Global Evaluation

Drug Group	Final Evaluation					Total Patients
	Marked	Moderate	Minimal	Unchanged	Worse	
HALDOL	18	4	5	2	0	29
Placebo	10	1	10	6	1	28

Statistical evaluation of these data reveals a significant ( $P < .05$ ) difference in the therapeutic responses to the two treatments in favor of HALDOL.

Of the 29 HALDOL-treated patients, 22 (76%) experienced "marked" to "moderate" responses; whereas, only 11 (39%) of 28 placebo patients experienced these responses.

Vital signs measured four hours post-drug treatment were not significantly different for the two drug groups.

One side effect, increased blood pressure, was reported for one placebo patient.

In summary, a dose of 2.0 mg HALDOL administered intramuscularly was significantly ( $P < .05$ ) more effective than placebo in controlling postoperative nausea and vomiting.

7. Combined Analysis of Four Investigators  
(Craythorne, N., M.D., Finestone, S., M.D.,  
Dannemiller, F., M.D., DeBakker, A., M.D.) (11)

A double-blind evaluation of the antiemetic properties  
of HALDOL in hospitalized patients following operative  
procedures.

The above-named investigators used the same protocol and case report form to study the intramuscular administration of HALDOL at a single dose of 2.0 mg in the therapeutic treatment of nausea and vomiting following operative procedures.

Two investigators (Craythorne, N. and Finestone, S.) studied too few patients to warrant individual tabulations and analyses. The data of these patients are combined with those of the other two investigators who used the same protocol and had sufficient patients for individual analyses.

One hundred and seven patients who required antiemetic treatment were entered into the study. Four patients (2 patients on HALDOL and one on placebo who had received a known antiemetic, and one on placebo who did not receive medication) were excluded from this combined analysis.

The final analysis included 53 patients in the HALDOL group and 50 in the placebo group (Table XXXVI).

Table XXXVI  
Patient Population

Investigator's Name	Number of Patients			
	Excluded		Included	
	HALDOL	Placebo	HALDOL	Placebo
N. Craythorne, M.D.	--	--	3	1
S. Finestone, M.D.	--	--	2	2
F. Dannemiller, M.D.	1	1	19	19
A. DeBakker, M.D.	1	1	29	28
Total	2	2	53	50

The characteristics of the 103 patients are shown in Table XXXVII. Each patient received either HALDOL 2.0 mg or placebo administered intramuscularly as a single dose immediately following the onset of postoperative vomiting.

Table XXXVII  
Patient Characteristics

Drug Group	Age		Sex		Weight		Total Patients
	Mean	Range	Male	Female	Mean	Range	
HALDOL	36.4	13-75	9	44	149.0	80-244	53
Placebo	37.0	13-70	10	40	140.7	92-223	50

Patients were evaluated for four hours post-drug administration.

The episodes of vomiting were recorded initially and every half-hour for the first hour and hourly up to four hours post-drug treatment. The data are presented in Table XXXVIII.

Table XXXVIII  
Episodes of Vomiting

Time of Observation	Drug Group	Frequency						Total Patients
		0	1	2	3	4	≥5	
Initially (Pre-Study Drug)	HALDOL	0	26	18	5	2	2	53
	Placebo	0	28	16	3	2	1	50
During First 1/2-Hour Post-Study Drug	HALDOL	43	9	0	1	0	0	53
	Placebo	34	13	2	1	0	0	50
During 1/2-Hour to One-Hour Period	HALDOL**	47	5	1	0	0	0	53
	Placebo	30	16	2	1	1	0	50
During One-Hour to Two-Hour Period	HALDOL*	47	5	1	0	0	0	53
	Placebo	31	9	2	1	0	0	43
During Two-Hour to Three-Hour Period	HALDOL	47	5	1	0	0	0	53
	Placebo	30	6	3	0	0	0	39
During Three-Hour to Four-Hour Period	HALDOL	47	5	1	0	0	0	53
	Placebo	32	3	2	0	0	0	37

\* Statistically significantly fewer episodes of vomiting during this period ( $P < .05$ , Rank "t" Test); \*\*  $P < .01$ .

A review of Table XXXVIII shows that there were fewer episodes of vomiting among the patients in the HALDOL group than in the group receiving placebo. The difference in response to the two treatments in episodes of vomiting was statistically significant favoring HALDOL at the one hour ( $P < .01$ ) and the 2 hour ( $P < .05$ ) evaluation points. These data are presented graphically in Figure 5 .

A review of the data shows that the patients in the placebo group had a higher cumulative incidence than did those in the HALDOL group. The difference in response to the two treatments was significant ( $P < .05$ ) favoring HALDOL. Of the 53 patients on HALDOL, 30 (57%), but only 17 (34%) of the 50 placebo patients were free of vomiting. The difference between the two groups is statistically significant ( $P < .05$ ) favoring HALDOL.

A summary of the occurrences of nausea is presented in Table XXXIX.

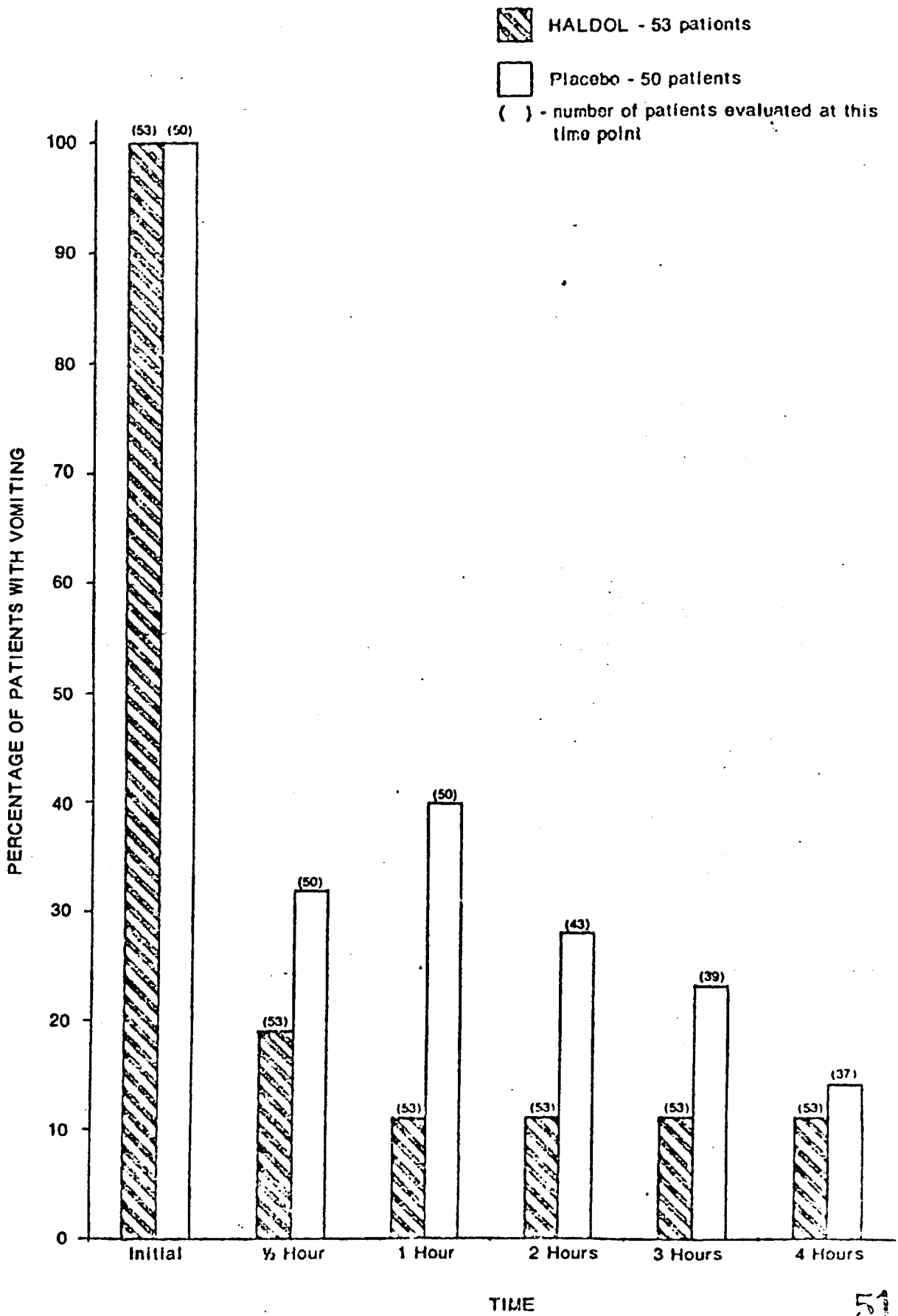
Table XXXIX  
Occurrences of Nausea

Time of Observation	Drug Group	Severity+ of Nausea				Total Patients
		0	1	2	3	
Initially (Pre-Study Drug)	HALDOL	0	5	20	27	52
	Placebo	0	6	18	26	50
During First 1/2 hour Post-Study Drug	HALDOL**	35	8	5	5	53
	Placebo	18	15	11	6	50
During 1/2-Hour to One-Hour Period	HALDOL**	42	4	3	4	53
	Placebo	22	10	5	13	50
During One-Hour to Two-Hour Period	HALDOL	40	7	3	3	53
	Placebo	27	7	3	6	43
During Two-Hour to Three-Hour Period	HALDOL*	42	8	0	3	53
	Placebo	24	7	3	5	39
During Three-Hour to Four-Hour Period	HALDOL	45	5	1	2	53
	Placebo	28	4	2	3	37

+ 0 - None, 1 - Mild, 2 - Moderate, and 3 - Marked

\* Statistically significantly less nausea among HALDOL patients ( $P < 0.05$ , Rank "t" Test); \*\* $P < 0.01$ .

Figure 5



A review of these data shows that there were fewer occurrences of nausea among patients on HALDOL than among patients on placebo. The difference in response to the two medications was statistically significant favoring HALDOL at the one-half hour ( $P < .01$ ), the one-hour ( $P < .01$ ) and at the three hour ( $P < .05$ ) evaluation points. These data are presented graphically in Figure 6 .

A review of the cumulative severity score distributions shows that the severity of nausea among the placebo patients was significantly ( $P < .05$ ) higher than among the HALDOL patients.

The investigator's global evaluation at the end of therapy is presented in Table XL.

Table XL  
Global Evaluation

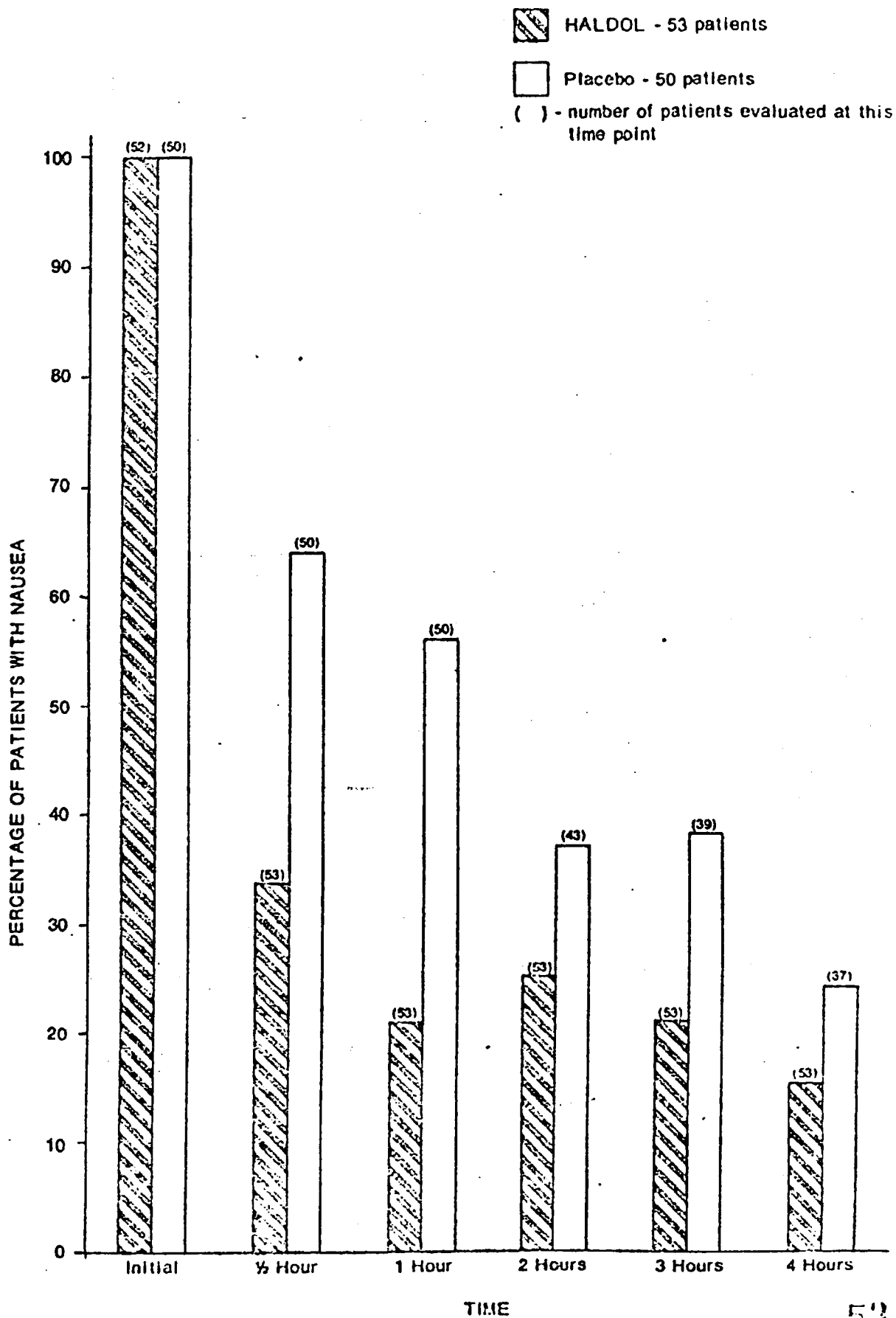
Drug Group	Final Evaluation					Total Patients
	Marked	Moderate	Minimal	Unchanged	Worse	
HALDOL	37	7	5	4	0	53
Placebo	19	1	16	11	3	50

The data demonstrates the superior ( $P < .01$ ) response in the patients on HALDOL in comparison with those on placebo.

Of the 53 patients treated with HALDOL, 44 (83%), but only 20(40%) of the 50 patients on placebo experienced marked to moderate responses.

Vital signs measured initially at 2 hours and at 4 hours showed no significant difference in readings between

Figure 6



the two study groups.

Two side effects were reported in these studies, one placebo patient had increased blood pressure and one HALDOL patient had decreased blood pressure.

In summary, the intramuscular injection of 2.0 mg HALDOL postoperatively was significantly ( $P < .05$  and in some instances  $P < .01$ ) more effective as an antiemetic than was placebo in controlling postoperative nausea and vomiting:



8. DeBakker, A., M.D. (12)

A double-blind evaluation of the antiemetic properties of HALDOL in hospitalized patients following operative procedures.

Forty-one patients hospitalized for surgical procedures were entered into the study. Three patients were excluded from this analysis (1-HALDOL 2.0 mg, 2-placebo) since they had experienced no initial vomiting.

The characteristics of the 38 patients are presented in Table XLI. Three groups of patients received HALDOL-1.0 mg, HALDOL-2.0 mg, or placebo administered intramuscularly as a single dose following the onset of postoperative vomiting.

Table XLI  
Patient Characteristics

Drug Group	Age		Sex		Weight		Total Patients
	Mean	Range	Male	Female	Mean	Range	
HALDOL - 1 mg	46.4	21-71	0	13	135.8	103-169	13
HALDOL - 2 mg	41.3	18-61	4	8	160.6	114-247	12
Placebo	42.6	19-71	2	11	144.5	103-212	13

In the recovery room, the episodes of vomiting were recorded initially at one-half hour intervals to one-hour and hourly to four hours. (Table XLII).

Table XLII  
Episodes of Vomiting

Time of Observation	Drug Group	Frequency				Total Patients
		0	1	2	3	
Initial	HALDOL - 1 mg	0	5	7	1	13
	HALDOL - 2 mg	0	6	5	1	12
	Placebo	0	8	5	0	13
1/2 Hour	HALDOL - 1 mg	11	1	1	0	13
	HALDOL - 2 mg	11	0	1	0	12
	Placebo	11	2	0	0	13
1 Hour	HALDOL - 1 mg	12	1	0	0	13
	HALDOL - 2 mg	10	2	0	0	12
	Placebo	12	1	0	0	13
2 Hours	HALDOL - 1 mg	12	1	0	0	13
	HALDOL - 2 mg	12	0	0	0	12
	Placebo	12	1	0	0	13
3 Hours	HALDOL - 1 mg	13	0	0	0	13
	HALDOL - 2 mg	11	1	0	0	12
	Placebo	13	0	0	0	13
4 Hours	HALDOL - 1 mg	12	1	0	0	13
	HALDOL - 2 mg	12	0	0	0	12
	Placebo	13	0	0	0	13

A review of these data indicates that the patients in each group had similarly severe initial symptomatology and that their responses to therapy were the same regardless of which medication was administered. The unusually high placebo effect which occurred immediately after the initial evaluation precluded the establishment of a significant difference between the treatment groups.

A review of the data obtained for nausea at the same evaluation points gave results similar to those obtained for vomiting with resulting similar high degree of effectiveness for all medication groups. Because of this similarity the summary table of nausea data is not presented here.

A summary of the investigator's global evaluations of the responses of the patients to medication over the four-hour period is presented in Table XLIII.

Table XLIII  
Global Evaluation

Drug Group	Final Evaluation					Total Patients
	Marked	Moderate	Minimal	Unchanged	Worse	
HALDOL-1 mg	11	2	0	0	0	13
HALDOL-2 mg	10	2	0	0	0	12
Placebo	12	1	0	0	0	13

A review of these data indicates that the differences between the global evaluations were not statistically significant.

There were no significant differences in the vital sign evaluations between the medication groups.

Only one patient (HALDOL-1.0 mg) experienced a side effect (decreased blood pressure) during the observation period.