RESULTS

Outcome of patients

This study included 36 patients admitted to the CCU for treatment of acute attack of SVT.the 36 patients were randomized into two groups. verapamil group &magnesium sulfate group.

Effects of verapamil &magnesium sulfate on conversion of SVT to normal sinus rhythm.

A) Verapamil group:

This group included 18 patients (7 females &11 males)with mean age 37.388 ± 10,204 years.Two patients with MVP& 16 patient without underlying heart disease.

All patients recieved dose A 13 out of 18 patients reverted to normal sinus rhythm which increased to 16 patients after dose B after 15 minutes of dose A , the effective dose of verapamil wase 5.2± 1.8mg.

Five patients failed to be reverted to normal sinus rhythm .the first patient was male 35 years old 65 KG with SVT pulse rate 180 bests/m .The second patient was male 44 years old 55 KG with SVT heart rate 190 beats/m.the third patient was female 30 years old .60 KG with SVT heart rate 190 b m. they recieved average 4.4 mg verapamil as a doseA but the heart rate not

changed after 15 minutes elapsed , so they recieved dose B (10 mg)and after 5 minutes they were reverted to normal sinus rhythm ,but they developed hypotension , (90/60) , (90/55), (90/60) respectively,they recieved intravenouse fluids &they were put on the trendelenberge posision .The fourth&fifth patient failed to reverted to normal sinus rhtyhm after dose B so they recieved synchronized D.C shock .

The fourth was female 40years old,55 Kg she recieved(4.1mg) verapamil as a dose A & after 15 minutes the heart rate chaged from 180 to 160 beats/m , so she recieved dose B (8,25mg) verapamil & after 15 minutes the heart rate was still 160 beats /m . S0 synchronized D.C shock was applied .The fifth was male 37 years ,70 KG, he recieved (5,25mg)verapamil as a dose A&after 15 minutes the heart rate changed from 200 b/m to 150 b/m so he recieved dose B (10.5mg)verapamil but after 15 minutes elapsed the heart rate was still 150 b/m so synchronised D.C shock was applied. The overall outcome of this group was 16 out of 18 patients reverted to normal sinus rhythm(88.88%).

B) Magnesium sulfate group:

This group included 18 patients (10 females &8 males)with mean age 38.6 = 10.56 years.One patient with MVP &one patient with

old myocardial infarction &16 patients without underlying heart disease.All patients recieved dose A 15 out of 18 patients reverted to normal sinus rhythm which increased to 17 patients after dose B after 15 minutes of dose A , the effective dose of magnesium wase 2 gm.

Three patients failed to reverted to normal sinus rhythm , the first patient was male 20 years old 75 KG with SVT pulse rate 175 bests/m .The second patient was male 60 years old 60 KG with SVT heart rate 140 beats/m, both of them recieved two grams of magnesium sulfate followed by 10 ml flush of normal saline as a dose A but the heart rate not changed after 10 minutes elapsed so they recieved dose B (two grams of $MgSO_4$)and after 5 minutes the heart rate reverted to normal sinus rhythm .the third patient failed to reverted to normal sinus rhtyhm after dose B so he recieved synchronized D.C shock .

He was male 38 years old. 80 Kg with SVT. heart rate 180 beats m not changed after dose A & dose B. The overall outcome of this group was 17 out of 18 patients were reverted to normal sinus rhythm(94.44%).

Table NO (3) compares between verapamil&magnesium group as regard all clinical data studied, from the table there's no significant difference between both

groups as regard all data except:

-Pulse rate after treatment which was significant high in magnesium group

- Systolic blood pressure drop which was significant in verapamil group , see figure (6).

- Pulse drop which was significant in magnesium group , see figure (14).

TABLE NO(3)

Data		Mean	+SD	t Test	P Value	Significance
age	verap.G	37.3	10.20	-.3692	>0.05	not signif
	mgso4.G	38.6	10.56			
wt	verap.G	70.466	8.27	-1.697	>0.05	not signif
	mgso4.G	75.80	8.92			
SBP (B)	verap.G	124.16	11.91	.6312	>0.05	not signif
	mgso4.G	121.83	10.199			
DBP(B)	verap.G	80.000	9.39	-.5000	>0.05	not signif
	mgso4.G	80.000	7.859			
SBP(A)	verap.G	113.38	16.740	-.7982	>0.05	not signif
	mgso4.G	116.94	8.768			
DBP(A)	verap.G	72.777	9.2708	-1.157	>0.05	not signif
	mgso4.G	76.111	7.962			
pulse(B)	verap.G	171.11	19.85	-.1594	>0.05	not signif
	mgso4.G	172.11	17.739			
pulse(A)	verap.G	97.8	19.48	-3.389	<0.001	highly signif
	mgso4.G	119.53	18.96			
E.F	verap.G	64.26	5.08	.876	>0.05	not signif
	mgso4.G	62.80	8.05			
SBP (drop)	verap.G	10.77	11.33	1.899	<0.05	signif
	mgso4.G	4.72	7.37			
DBP (drop)	verap.G	7.222	9.27	1.114	>0.05	not signif
	mgso4.G	3.888	8.66			
pulse (drop)	verap.G	73.53	21.56	2.94	<0.05	signif
	mgso4.G	52.33	21.81			

A after

B before

A comparison of befor & after treatment as regard the various parameters studied in each group was done:

from these comparison in the verapamil group there was :

- highly significant difference drop in systolic blood pressure,see table no(4) &see figure no(6).
- significant difference drop in diastolic blood pressure, see table no (5)&see figure no (7).
- highly significant difference drop in pulse, see table no (6) & see figure no (8).

In the magnesium sulfate group there was :

- significant difference drop in systolic blood pressure,see table no (7) &see figure no (9).
- significant difference drop in diastolic blood pressure, see table no (8) &see figure no (10)
- highly significant difference drop in pulse see table no (9)& see figure no (11)

Verapamil group

TABLE NO(4) systolic blood pressure

	mean	± S D	T test	P value	sig
Before	124,166	± 11,9127	4,0332	<0,001	HIGH
After	113,3889	± 16,7407			SIGNIF

see figure(6)

TABLE NO (5) diastolic blood pressure

	mean	± S D	T test	P value	sig
Before	80,000	± 9,393			
After	72,7778	± 9,2708	3,3051	<,05	SIGNIF

see figure(7)

TABLE NO (6) pulse

	mean	± S D	T test	P value	sig
Before	171,111	± 19,8521	14,7615	<,001	HIGH
After	97,8889	± 19,484			SIGNIF

see figure(8)

magnesium group

TABLE NO(7) systolic blood pressure

	mean	± S D	T test	P value	sig
Before	121,8333	± 10,1995	2.7978	<,05	SIGNIF
After	116,9444	± 8,7681			

see figure(9)

TABLE NO (8) diastolic blood pressure

	mean	± S D	T test	P value	sig
Before	80,000	± 7,8591	1,9031	<,05	SIGNIF
After	76,1111	± 9,2708			

see figure(10)

TABLE NO(9) pulse

	mean	± S D	T test	P value	sig
Before	172,111	± 17,7396	10,4873	,001	HIGH
After	119,6111	± 18,9679			SIGNIF

see figure(11)

chi square test to compare between different groups see table NO(10).

when we compare the response of patients to treatment after dose A and dose B& number of patients who are not respond either to dose A or dose B in each group we found that there was no significant differance between both groups

TABLE NO (10).

group	dose A	dose B	not respond	TOTAL
verapamil group	13	3	2	18
Mgso4 group	15	2	1	18
TOTAL	28	5	3	36

p 0,05 = not sig .

COMPARISON AS REGARD THE TIME OF CONVERSION

TABLE NO (11)

GROUP	MEAN	S.D	RANG
verapamil	106,66 second	±21,14	80-150 second
magnesium	29,33 second	±6,06	20-40 second

T 12.17 P 0.01 highly significant for magnesium.

CORRELATION WITH LEFT VENTRICULAR EJECTION FRACTION

- The correlation was done between the pulse drop and left ventricular ejection fraction in the verapamil group revealed
- A non significant positive correlation with ejection fraction .. as shown on table NO(12) &Figure NO(15)&NO(16).

Table (12) correlation between pulse drop & ejection fraction

parameters data	" r "	sig
Ejection fraction	,0465	not significant

critical value = +/- 0,466

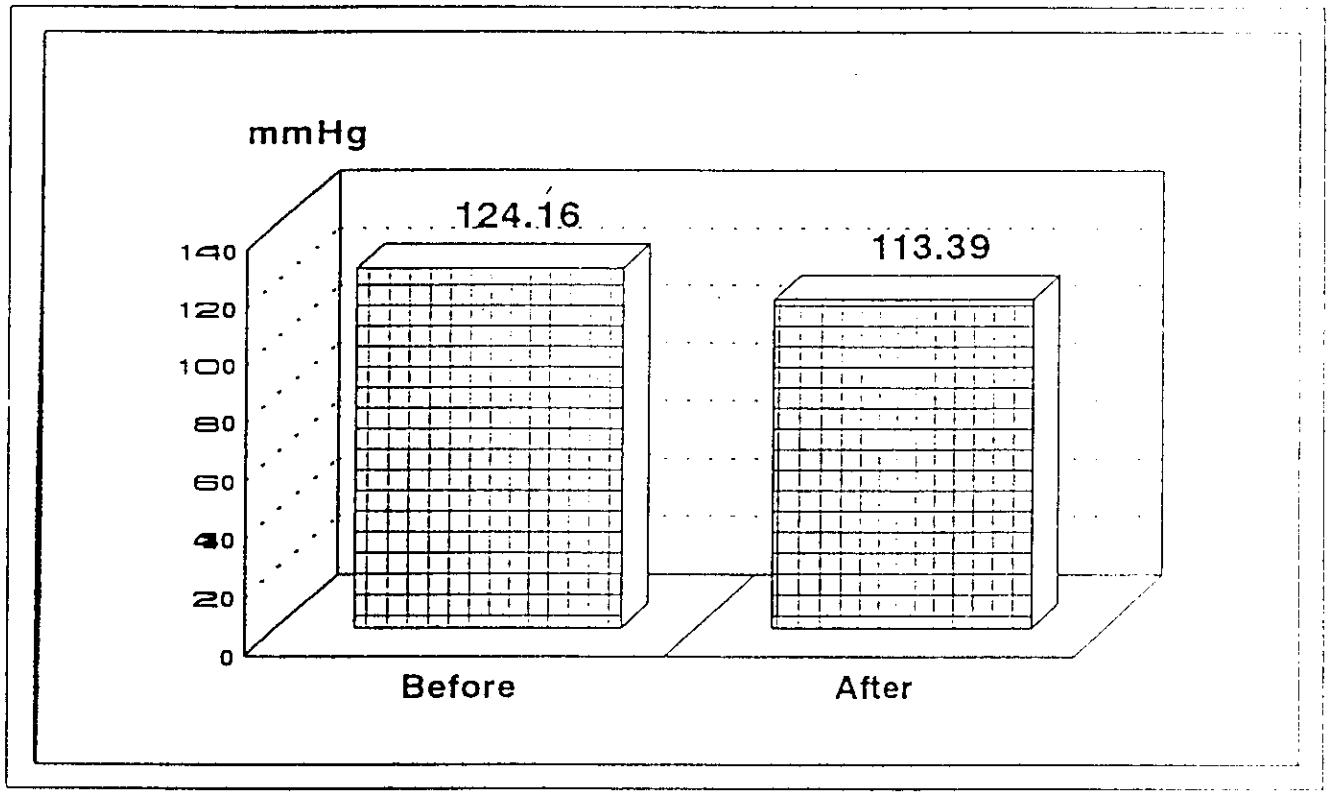
- correlation was done between the pulse drop and left ventricular ejection fraction in the magnesium group revealed .
- A non significant positive correlation with ejection fraction as shown in table NO (13) &Figure NO(15)&NO(17)

Table (13) correlation between pulse drop &ejection fraction

parameters	" r "	sig
E . F	,1806	not significant

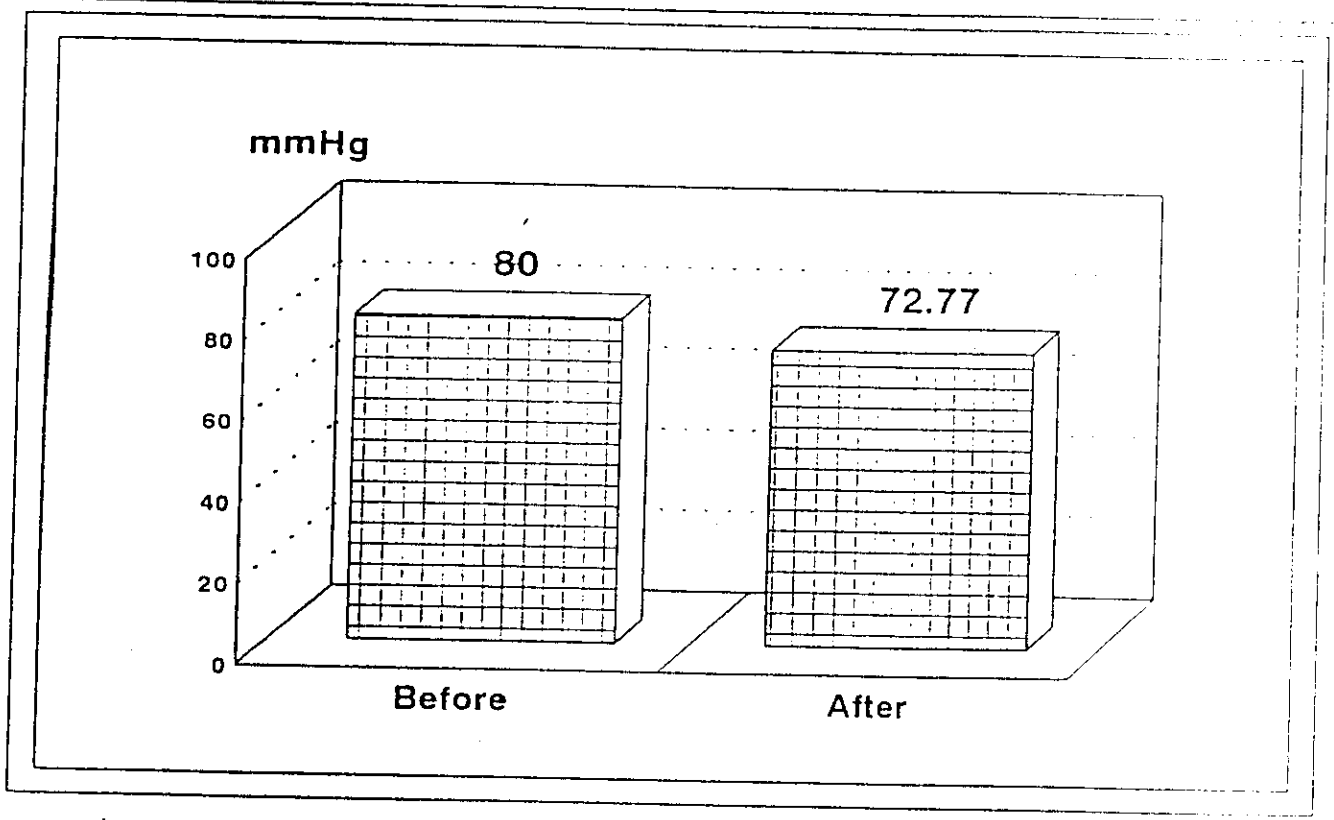
critical value - - ,46

Fig. (6): Mean SBP before and after verapamil intake



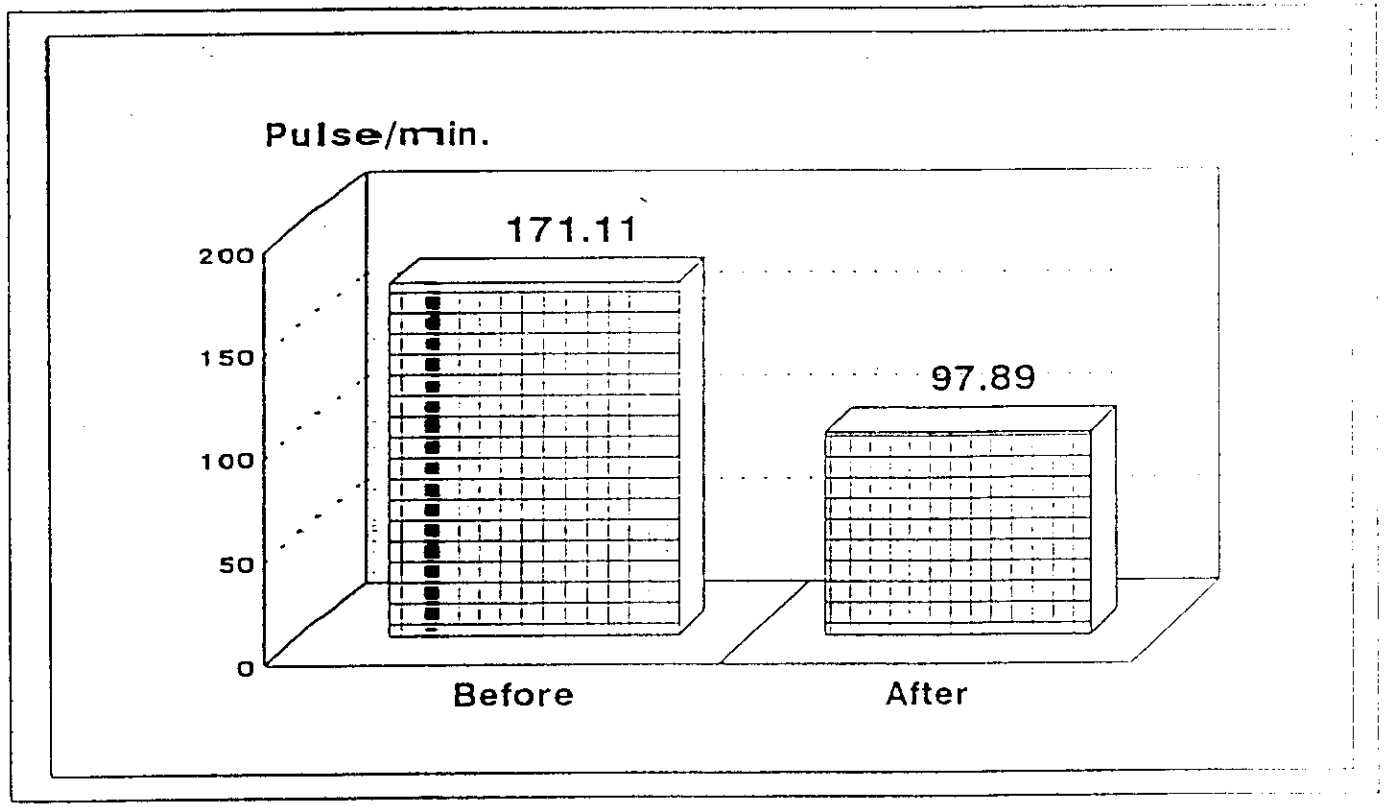
(P<0.001 = HS)

Fig. (7): Mean DBP before and after verapamil intake



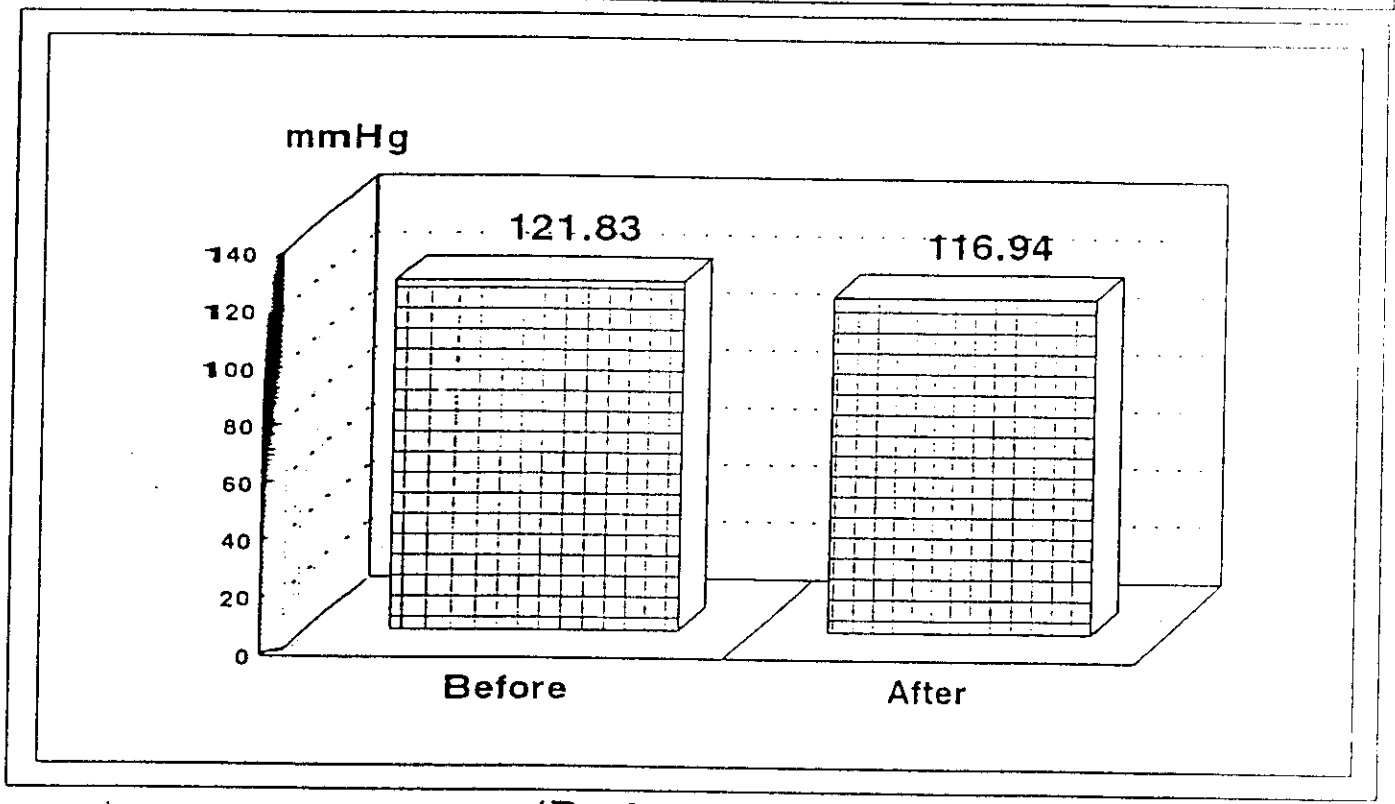
(P<0.05 = S)

Fig. (8): Mean pulse rate before and after verapamil intake



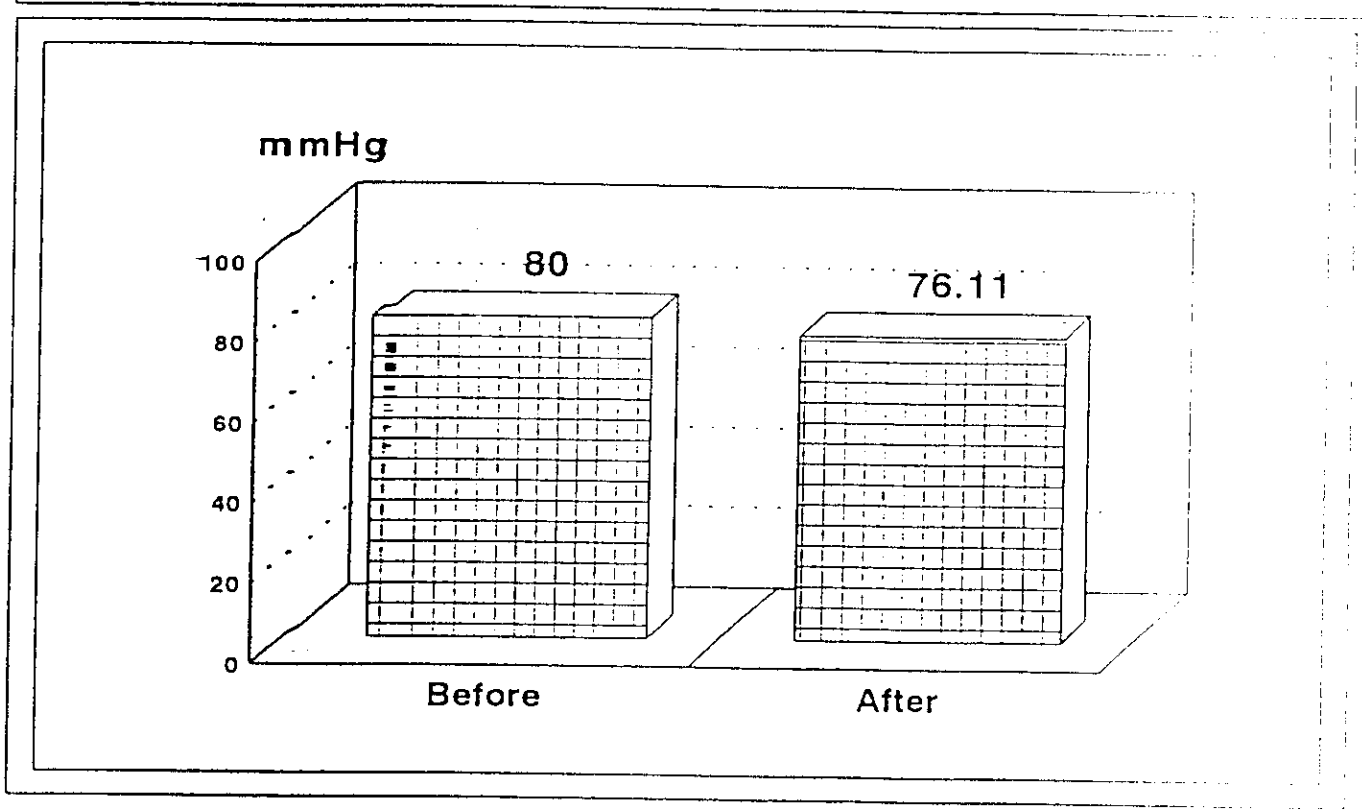
(P<0.001 = HS)

Fig. (9): Mean SBP before and after MgSO4 intake



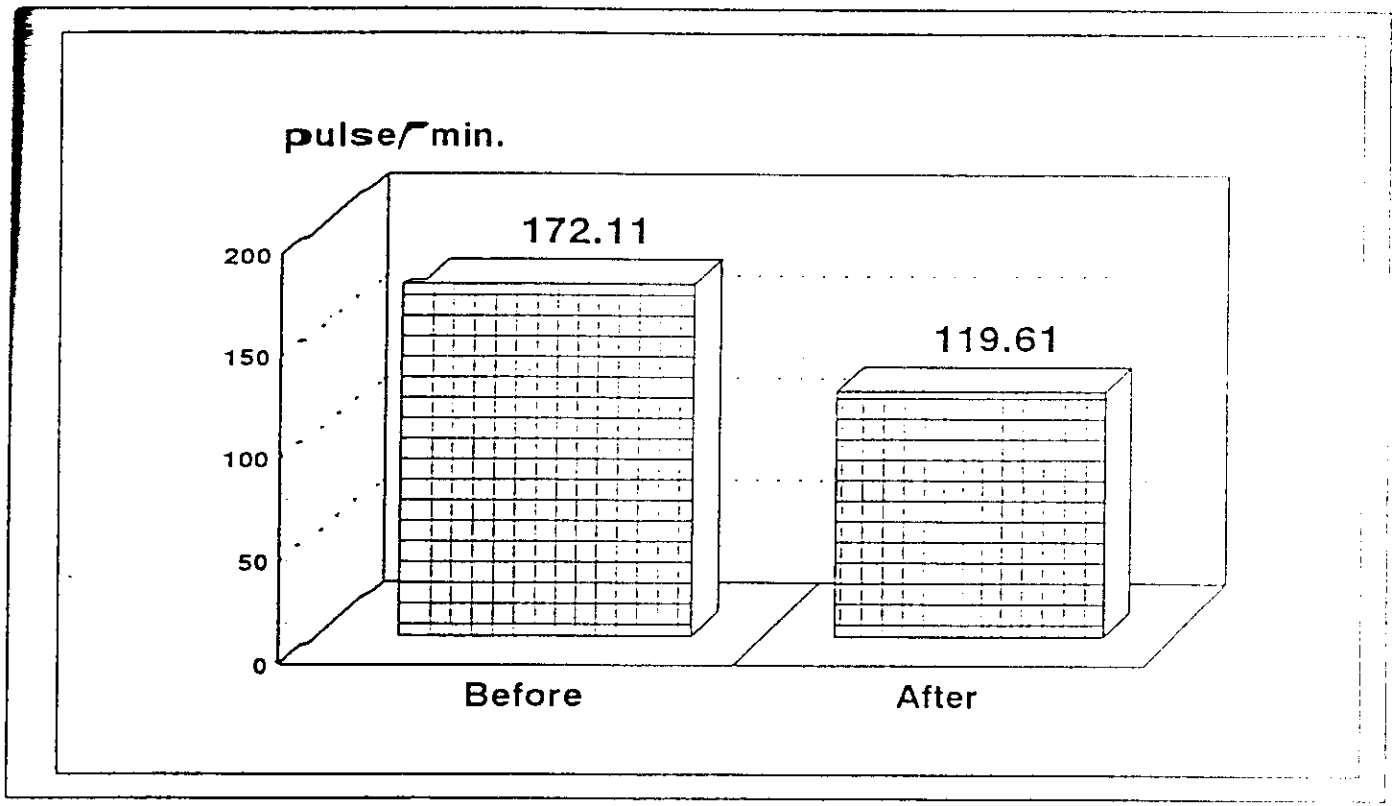
(P<0.05 = S)

Fig. (10): Mean DBP before and after MgSO4 intake



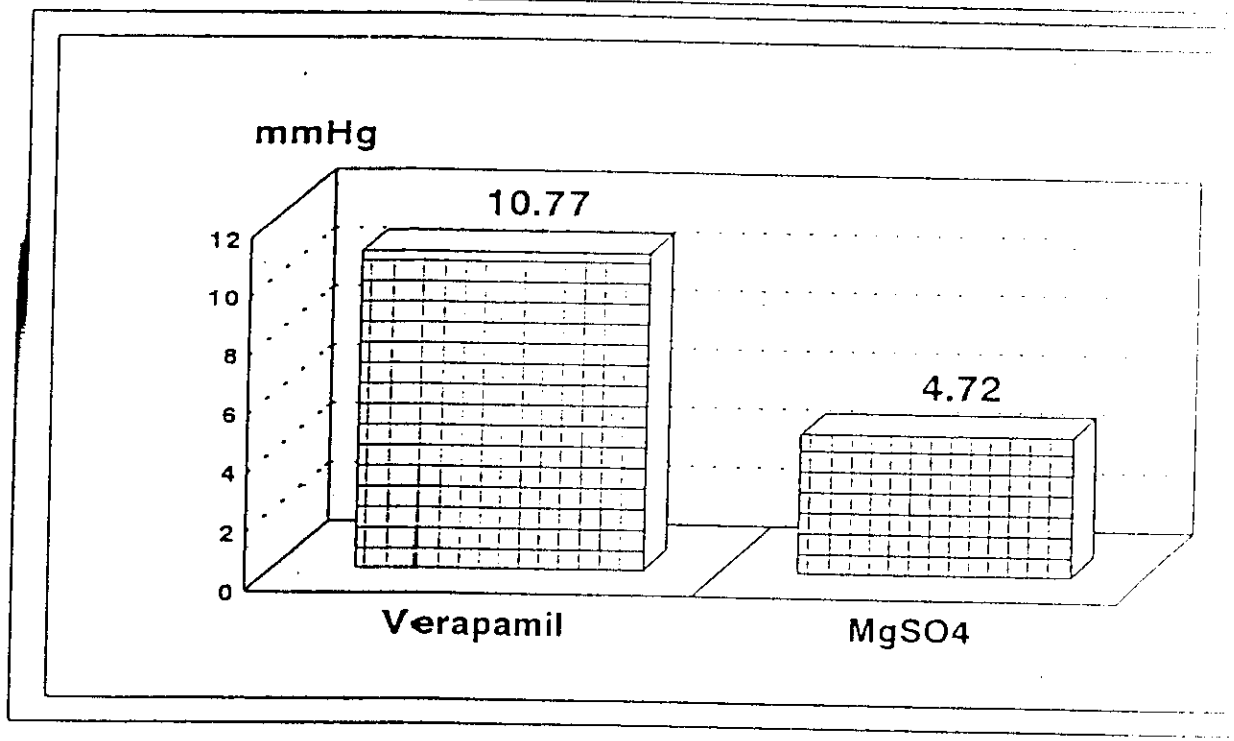
(P<0.05 = S)

Fig- (iv): Mean pulse rate before and after MgSO4 intake



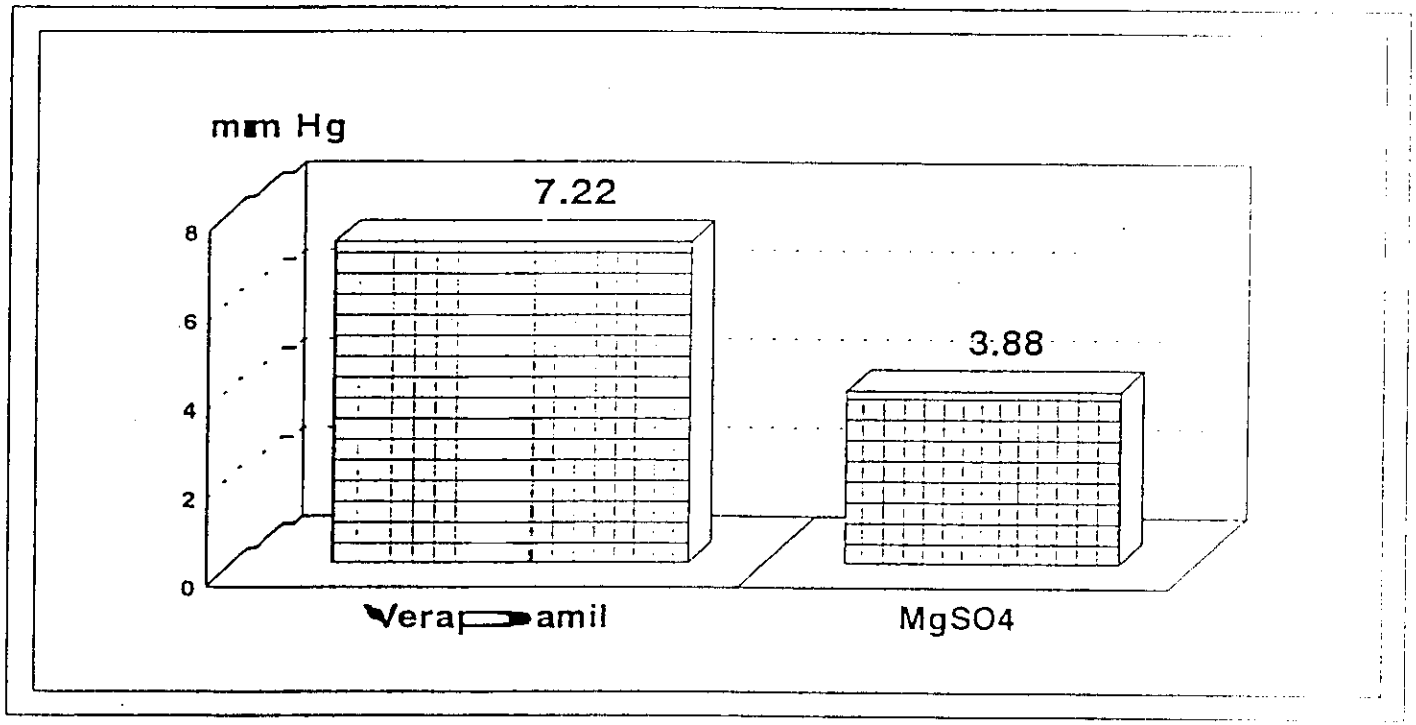
(P<0.001 = HS)

Fig. (12): Mean drop in SBP in both verapamil and MgSO4 treated groups



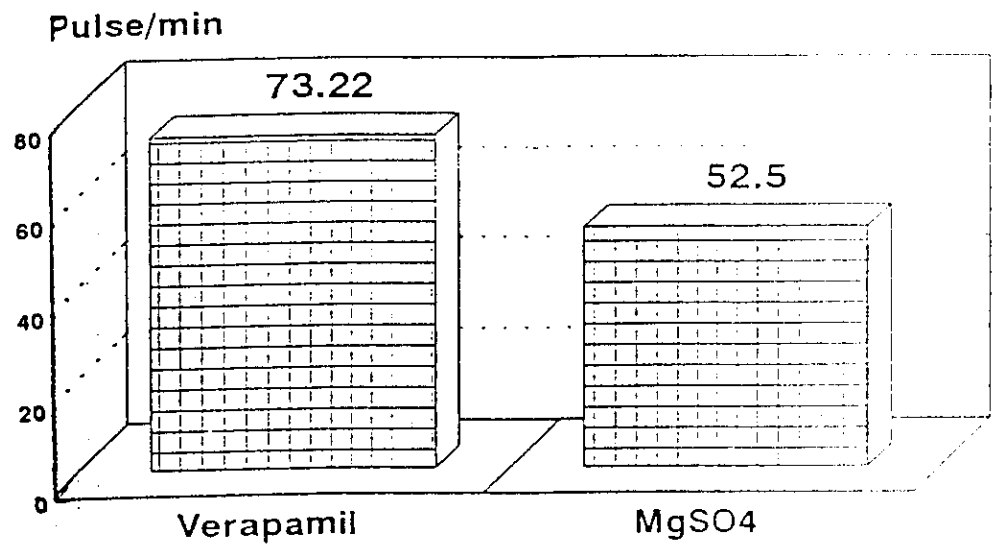
(P<0.05 = S)

Fig. (b): Mean drop in DBP in both verapamil and MgSO4 treated groups



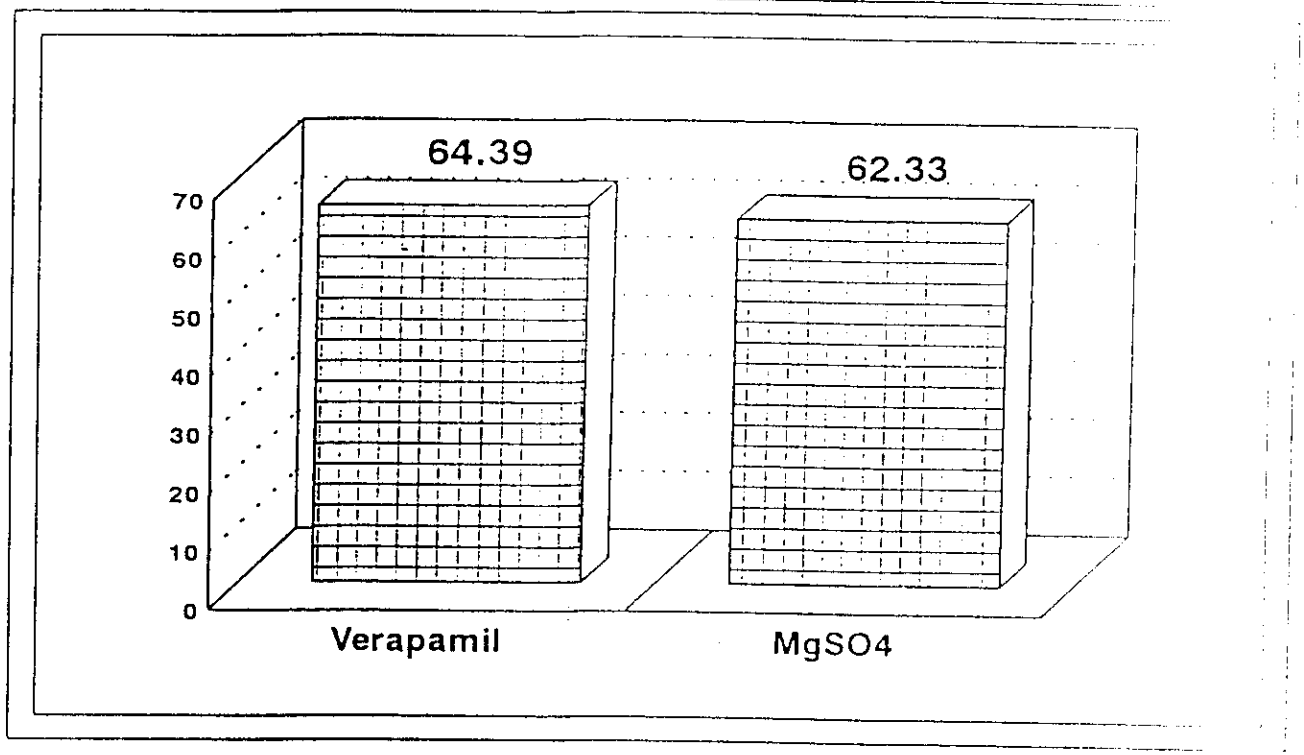
(P>0.05 = NS)

Fig. (14): Mean drop in pulse rate in both verapamil and MgSO4 treated groups



(P<0.05 = S)

Fig. (15): Mean Ejection Fraction (EF) in both verapamil and MgSO4 treated groups



(P>0.05 = NS)

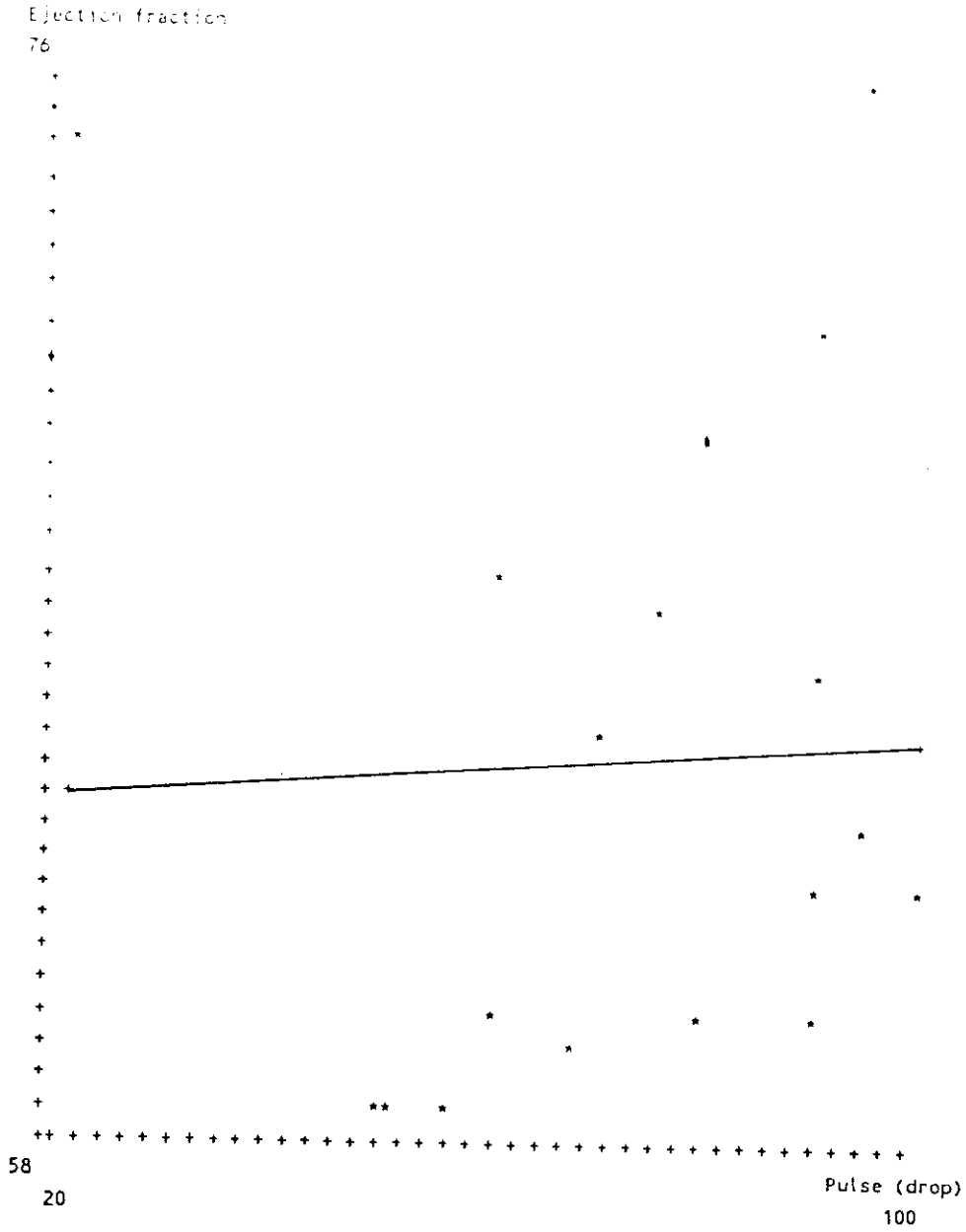


Fig. (16): Correlation between ejection fraction and pulse drop in verapamil cases

REGRESSION EQUATION (Shown by +'s on scatterplot):

INTERCEPT= 63.44122074319
SLOPE= 1.2942357073283E-02

r = .0465
(P>0.05 = NS)

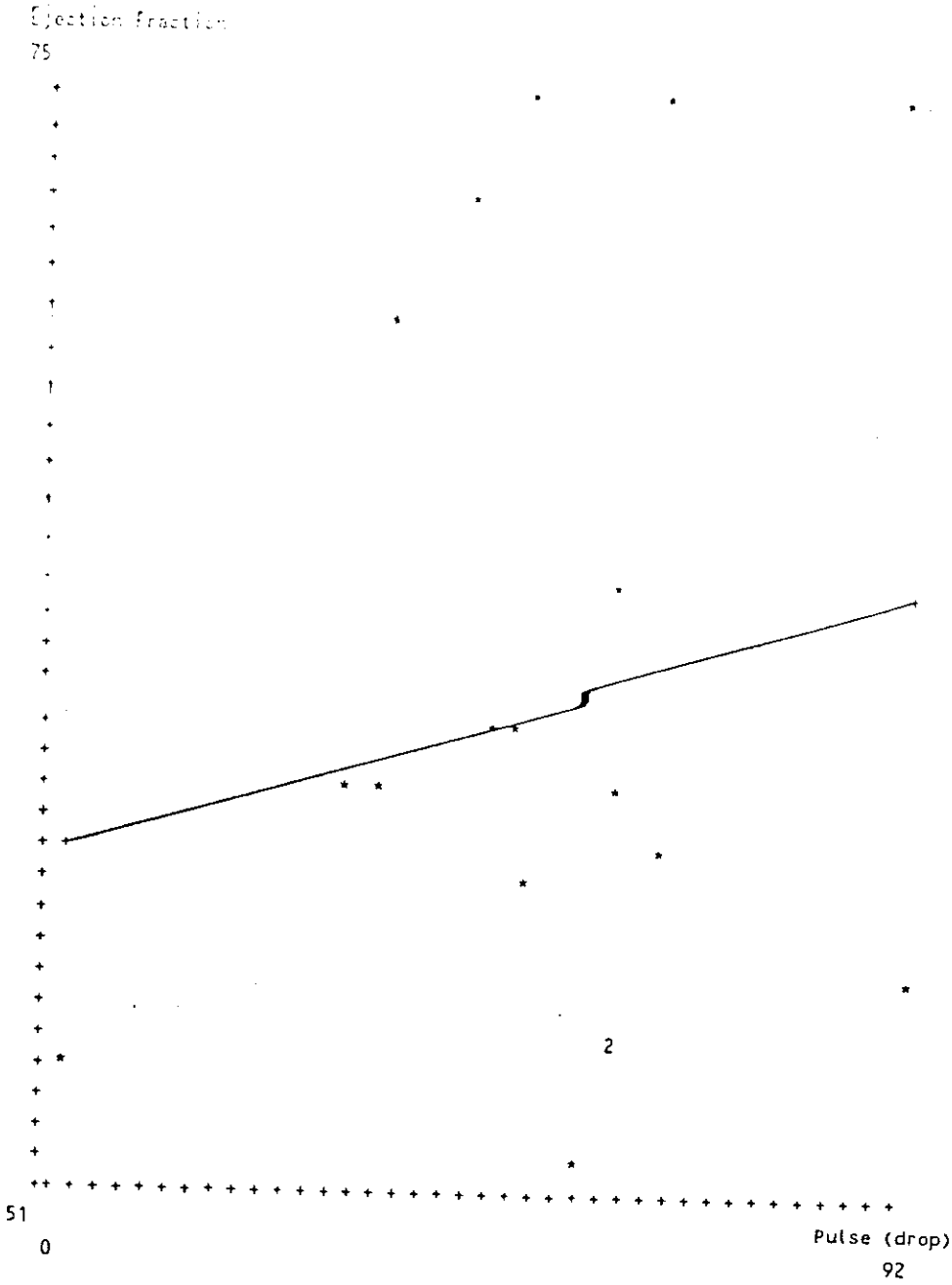


Fig. 47: Correlation between ejection fraction and pulse drop in MgSo4 cases

REGRESSION EQUATION (Shown by +'s on scatterplot):

INTERCEPT= 58.739084132055
SLOPE= 6.8461889548149E-02

r = .1806
(P>0.05 = NS)