

RESULT

RESULTS

(I) MEDICAL RESULTS.

First Group; We found that minipress caused higher Nasal resistance in patients with Nasal resistance before taking th drug.

The results often patient are illustrated in tale (I).

Name Of Patient	Rt nostril		Lt nostril		mean		before
	insp.	examp.	insp.	examp.	insp.	examp.	after
A. Rashed	0.254	0.265	0.265	0.298	0.130	0.140	before
	0.301	0.311	0.328	0.026	0.175	0.172	after
F. Ali	0.215	0.248	0.182	0.211	0.095	0.114	before
	0.303	0.315	0.335	0.067	0.159	0.055	after
Abdel Wahab	0.176	0.215	0.209	0.248	0.096	0.115	before
	0.283	0.305	0.297	0.150	0.145	0.101	after
F. Abdel Hamid	0.291	0.225	0.209	0.198	0.122	0.105	before
	0.339	0.303	0.296	0.246	0.158	0.136	after
O. Sayed	0.189	0.211	0.225	0.195	0.103	0.101	before
	0.271	0.349	0.280	0.379	0.139	0.186	after
M. Okasha	0.223	0.191	0.196	0.215	0.104	0.101	before
	0.311	0.293	0.298	0.356	0.152	0.161	after
S. Ahmed	0.198	0.217	0.187	0.215	0.096	0.108	before
	0.308	0.354	0.293	0.314	0.150	0.166	after
R. Mehana	0.201	0.208	0.183	0.197	0.096	0.101	before
	0.250	0.323	0.211	0.393	0.119	0.177	after
M. Elsayed	0.223	0.214	0.286	0.189	0.125	0.100	before
	0.401	0.413	0.446	0.298	0.211	0.173	after
M. Abdo	0.199	0.240	0.243	0.274	0.109	0.128	before
	0.279	0.291	0.302	0.106	0.145	0.078	after

Fig I

These Curves show nasal resistance for patient before taking prazosin and after taking it .

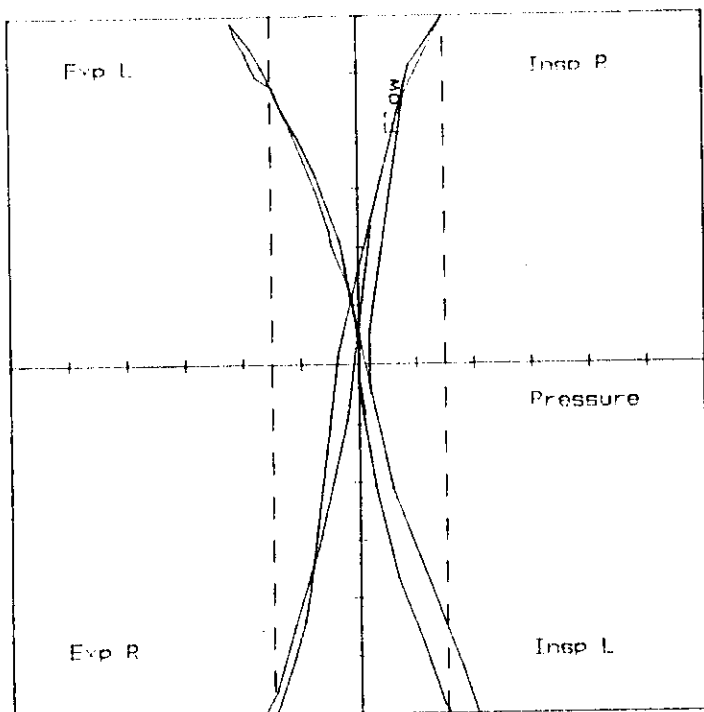
MERCURY ELECTRONICS (SCOTLAND) LTD.
RHINOMANOMETER NR7D

Reference No.: 23P
Name: AZIZA RASHAD
Date of Birth: 24-2-1964 Sex: F
Weight: 62 kg Height: 1.6 m
Test Date.Time: Sat, 21 Mar 1992.11:54

Mean Res. (Pa.s/cc)	Left	Right
Inspiration	0.265	0.254
Max. Deviation	0.014	0.009
No. of Measurements:	4	4

Expiration	0.298	0.265
Max. Deviation	0.016	0.020
No. of Measurements:	4	4

At Reference Value: 150 Pa.
Horizontal Scale: 1 Division = 100 Pa.
Vertical Scale: 1 Division = 100 cc/s



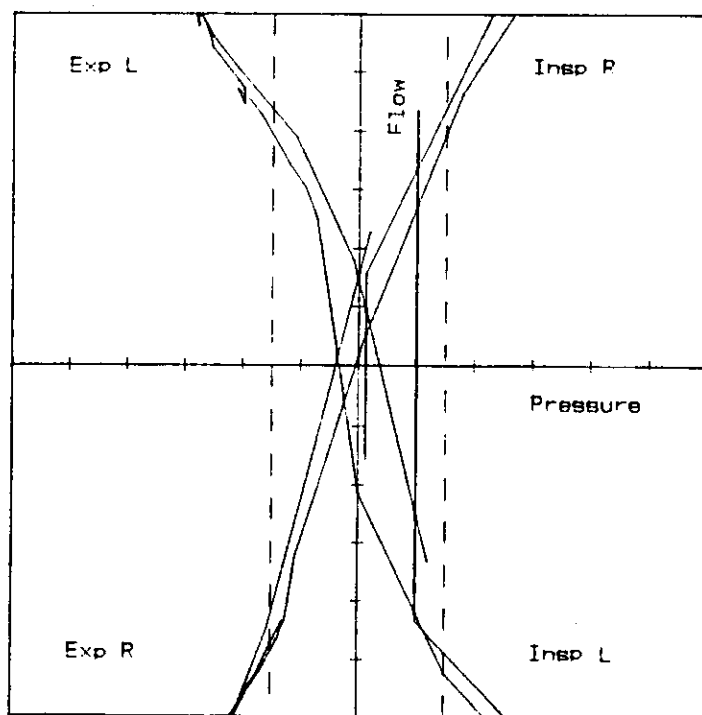
MERCURY ELECTRONICS (SCOTLAND) LTD.
RHINOMANOMETER NR7D

Reference No.: 29
Name: AZIZA RASHAD
Date of Birth: 24-2-1964 Sex: F
Weight: 75 kg Height: 1.65 m
Test Date.Time: Sat, 18 Apr 1992.11:09

Mean Res. (Pa.s/cc)	Left	Right
Inspiration	0.328	0.301
Max. Deviation	0.060	0.040
No. of Measurements:	4	4

Expiration	0.382	0.311
Max. Deviation	0.026	0.018
No. of Measurements:	5	5

At Reference Value: 150 Pa.
Horizontal Scale: 1 Division = 100 Pa.
Vertical Scale: 1 Division = 100 cc/s



The Second Group:

We found that capoten caused significant increasing resistance of nasal air flow wich is complianed by patients after taking the drug.

Table (II) will show the complete result of this group.

Name Of Patient	Rt nostril		Lt nostril		mean		before
	insp.	examp.	insp.	examp.	insp.	examp.	after
A. Abdel Rahman	1.006	2.440	0.259	0.331	0.206	0.222	before
	1.067	2.521	0.345	0.489	0.261	0.410	after
T. E. Osman	0.247	0.322	0.000	0.376	0.000	0.173	before
	0.416	0.731	0.353	0.483	0.191	0.291	after
A. Metwaly	0.147	0.222	0.103	0.376	0.061	0.140	before
	0.273	0.393	0.226	0.236	0.124	0.147	after
I. Abdelal	0.157	0.232	0.098	0.286	0.060	0.151	before
	0.316	0.331	0.353	0.276	0.167	0.151	after
A. Mostafa	0.160	0.301	0.159	0.000	0.080	0.000	before
	0.206	0.377	0.173	0.103	0.107	0.079	after
E. M. Elsayed	0.160	0.301	0.181	0.301	0.085	0.150	before
	0.203	0.376	0.191	0.378	0.183	0.204	after
K. Ahmed	0.190	0.309	0.189	0.103	0.095	0.077	before
	0.236	0.386	0.203	0.201	0.109	0.132	after
M. Ali	0.180	0.280	0.169	0.101	0.087	0.078	before
	0.226	0.377	0.193	0.203	0.104	0.132	after
T. Husien	0.190	0.332	0.161	0.273	0.085	0.150	before
	0.233	0.336	0.221	0.338	0.113	0.160	after
G. Elsayed	0.170	0.320	0.195	0.320	0.166	0.160	before
	0.214	0.388	0.201	0.391	0.104	0.159	after

Fig 2

These Curves show nasal resistance for patient before taking Captopril and after taking it .

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RHINOMANOMETER NR7D

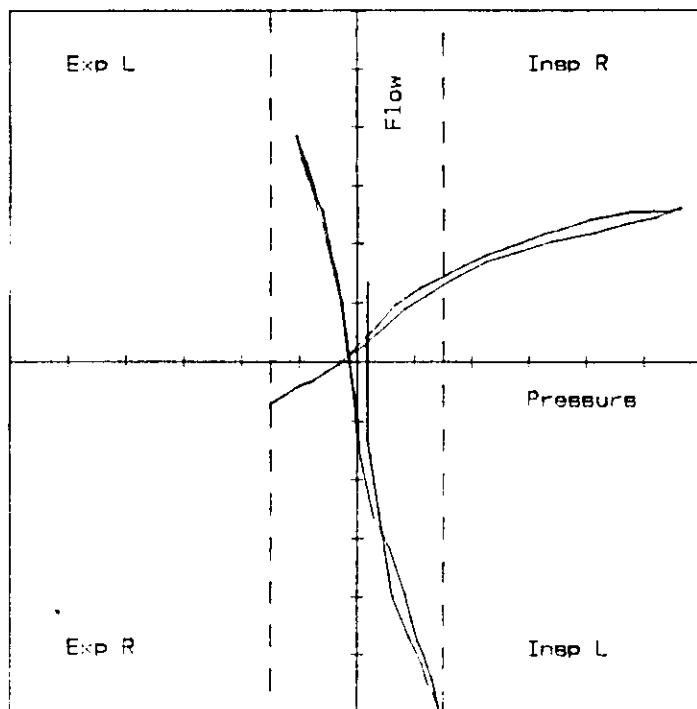
Reference No.: 7P
Name: ABDU MOHAMED
Date of Birth: 13-9-1935 Sex: M
Weight: 95 kg Height: 1.8 m
Test Date/Time: Sat, 14 Feb 1992.10:57

Mean Res. (Pa.s/cc) Left Right

Inspiration 0.259 1.006
Max. Deviation 0.003 0.037
No. of Measurements: 3 4

Expiration 0.331 2.440
Max. Deviation 0.031 0.228
No. of Measurements: 3 3

At Reference Value: 150 Pa.
Horizontal Scale: 1 Division = 100 Pa.
Vertical Scale: 1 Division = 100 cc/s



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RHINOMANOMETER NR7D

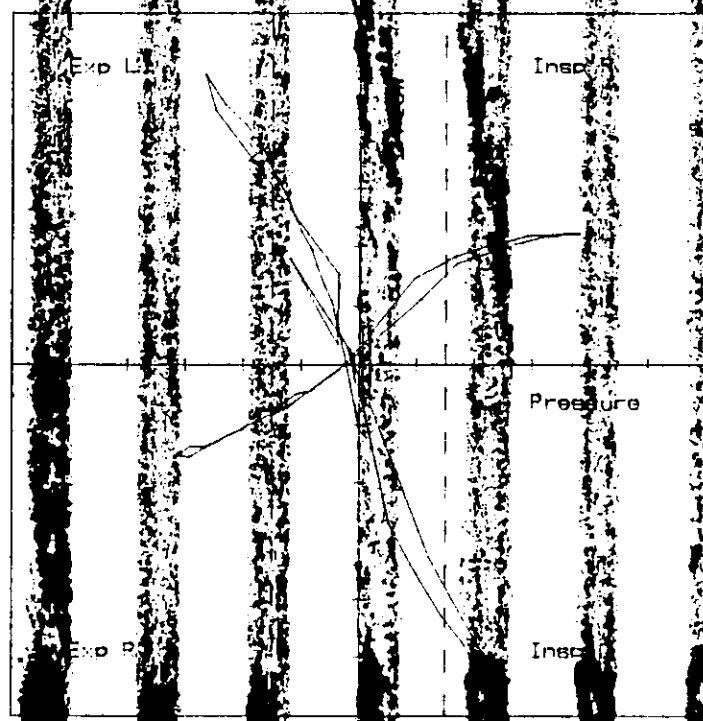
Reference No.:
Name: ABDU MOHAMED
Date of Birth: 13-9-1935 Sex: M
Weight: 95 kg Height: 1.8 m
Test Date/Time: Sat, 9 Mar 1992.11:38

Mean Res. (Pa.s/cc) Left Right

Inspiration 0.345 1.067
Max. Deviation 0.031 0.310
No. of Measurements: 4 4

Expiration 0.489 2.521
Max. Deviation 0.077 0.724
No. of Measurements: 4 4

At Reference Value: 150 Pa.
Horizontal Scale: 1 Division = 100 Pa.
Vertical Scale: 1 Division = 100 cc/s



The Third Group:

We found that inderal did not cause much increase of nasal resistance and there was no difference between nasal resistance before and after taking the drug.

Table (III) illustrates: the effect of on the nasal air flow in this group.

Name Of Patient	Rt nostril		Lt nostril		mean		before
	insp.	examp.	insp.	examp.	insp.	examp.	after
f. Ibrahim	0.309	0.361	0.317	0.352	0.156	0.178	before
	0.434	0.492	0.359	0.442	0.197	0.232	after
M. Sadiek	0.301	0.353	0.304	0.343	0.159	0.174	before
	0.426	0.484	0.351	0.441	0.192	0.231	after
Z. M. Elsherief	0.189	0.203	0.195	0.227	0.096	0.107	before
	0.231	0.266	0.255	0.242	0.121	0.127	after
A. Ali	0.209	0.251	0.214	0.235	0.105	0.121	before
	0.327	0.370	0.259	0.333	0.145	0.175	after
F. H. Mousa	0.297	0.346	0.287	0.331	0.146	0.169	before
	0.332	0.377	0.255	0.259	0.144	0.154	after
I. Sarhan	0.329	0.331	0.171	0.201	0.115	0.125	before
	0.375	0.382	0.271	0.299	0.157	0.168	after
M. Ali	0.277	0.328	0.278	0.319	0.139	0.162	before
	0.401	0.453	0.332	0.412	0.182	0.216	after
Kh. Mansi	0.267	0.311	0.281	0.302	0.137	0.153	before
	0.384	0.442	0.309	0.350	0.171	0.195	after
Dr. H. Kadry	0.239	0.281	0.247	0.272	0.121	0.138	before
	0.367	0.419	0.289	0.367	0.162	0.196	after
S. Saber	0.211	0.251	0.217	0.267	0.107	0.129	before
	0.330	0.386	0.261	0.353	0.146	0.184	after

Fig 3

These Curves show nasal resistance for patient before taking propranolol and after taking it .

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RHINOMANOMETER NR7D

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RHINOMANOMETER NR7D

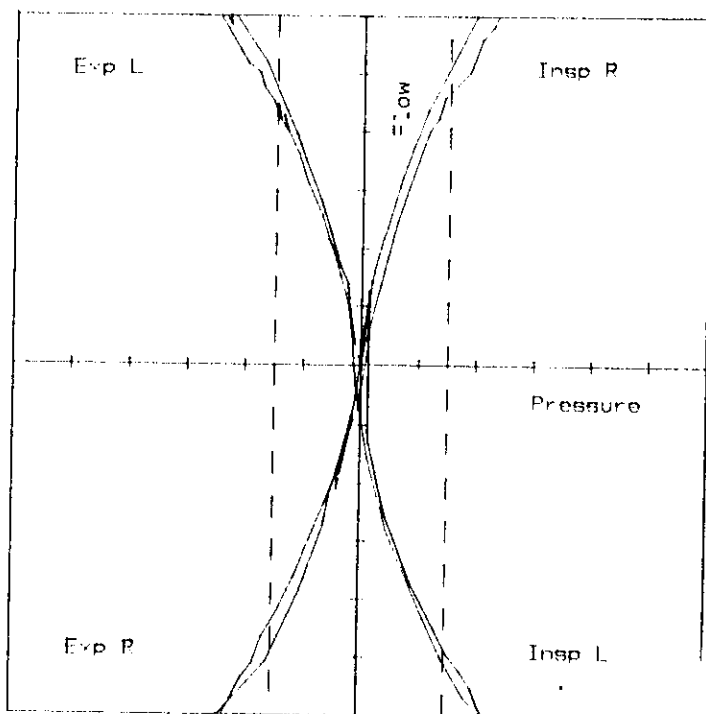
Reference No.: 12P
Name: FATMA IBRAHIM
Date of Birth: 26-8-1946 Sex: F
Weight: 80 kg Height: 1.63 m
Test Date.Time: Sat,21 Mar 1992.11:45

Mean Res. (Pa.s/cc) Left Right

Inspiration 0.317 0.309
Max. Deviation 0.034 0.021
No. of Measurements: 3 3

Expiration 0.352 0.361
Max. Deviation 0.041 0.057
No. of Measurements: 2 2

At Reference Value: 150 Pa.
Horizontal Scale: 1 Division = 100 Pa.
Vertical Scale: 1 Division = 100 cc/s



Before taking the drug

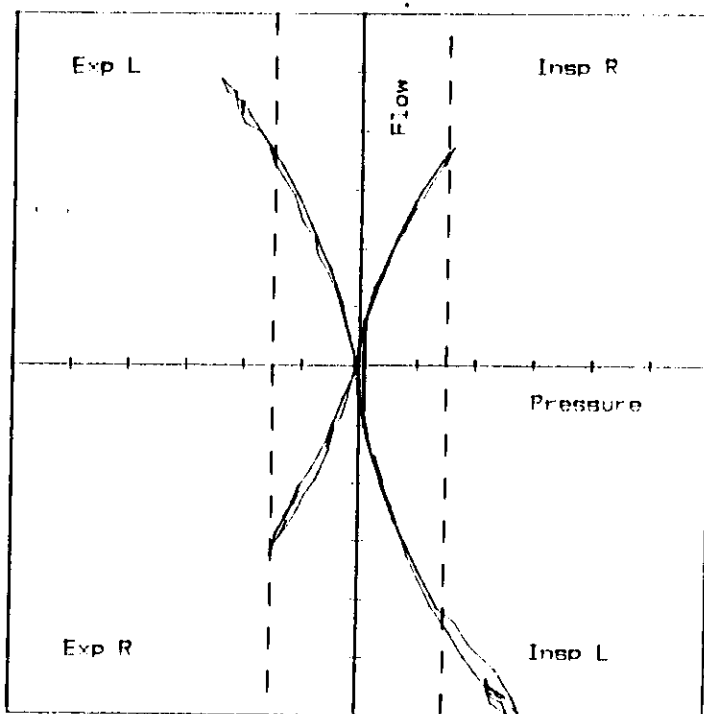
Reference No.: 12 R
Name: FATMA IBRAHIM
Date of Birth: 26-8-1946 Sex: F
Weight: 80 kg Height: 1.63 m
Test Date.Time: Sat,18 Apr 1992.10:52

Mean Res. (Pa.s/cc) Left Right

Inspiration 0.359 0.434
Max. Deviation 0.023 0.031
No. of Measurements: 5 5

Expiration 0.442 0.492
Max. Deviation 0.031 0.023
No. of Measurements: 2 2

At Reference Value: 150 Pa.
Horizontal Scale: 1 Division = 100 Pa.
Vertical Scale: 1 Division = 100 cc/s



After taking the drug

The Fourth Group:

We found that Epilate caused big increase of nasal resistance which was manifested by patients after end of the treatment period.

A look at table (IV) will show the results of the fourth group after Rhinomanometry recording.

Name Of Patient	Rt nostril		Lt nostril		mean		before
	insp.	examp.	insp.	examp.	insp.	examp.	after
A. M. Osman	0.339	0.343	0.186	0.000	0.120	0.000	before
	0.385	2.392	0.261	0.288	0.155	0.166	after
A. M. Soliman	0.379	0.361	0.322	0.000	0.160	0.000	before
	0.325	0.000	0.000	0.263	0.000	0.000	after
K. Abu Elkhier	0.309	0.323	0.166	0.020	0.108	0.019	before
	0.359	0.372	0.241	0.266	0.145	0.155	after
N. Ebrahim	0.299	0.303	0.136	0.068	0.093	0.056	before
	0.359	0.372	0.243	0.277	0.145	0.159	after
S. Mustafa	0.319	0.241	0.156	0.179	0.105	0.099	before
	0.355	0.392	0.299	0.388	0.072	0.195	after
N. Ahmed	0.327	0.427	0.078	0.545	0.251	0.396	before
	0.607	0.013	0.399	0.635	0.256	0.433	after
G. Elsayed	0.215	0.229	0.232	0.000	0.111	0.000	before
	0.165	0.274	0.186	0.275	0.088	0.137	after
F. Abdel Al	0.279	0.284	0.230	0.103	0.126	0.076	before
	0.385	0.389	0.320	0.301	0.175	0.170	after
S. Abdel Latief	0.291	0.313	0.157	0.017	0.102	0.016	before
	0.351	0.367	0.243	0.271	0.144	0.156	after
N. Atiea	0.296	0.303	0.146	0.040	0.098	0.035	before
	0.365	0.352	0.231	0.268	0.141	0.152	after

Fig 4

These Cueves show nasal resistance for the patient before taking nifedipin and after taking it .

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RHINOMANOMETER NR7D

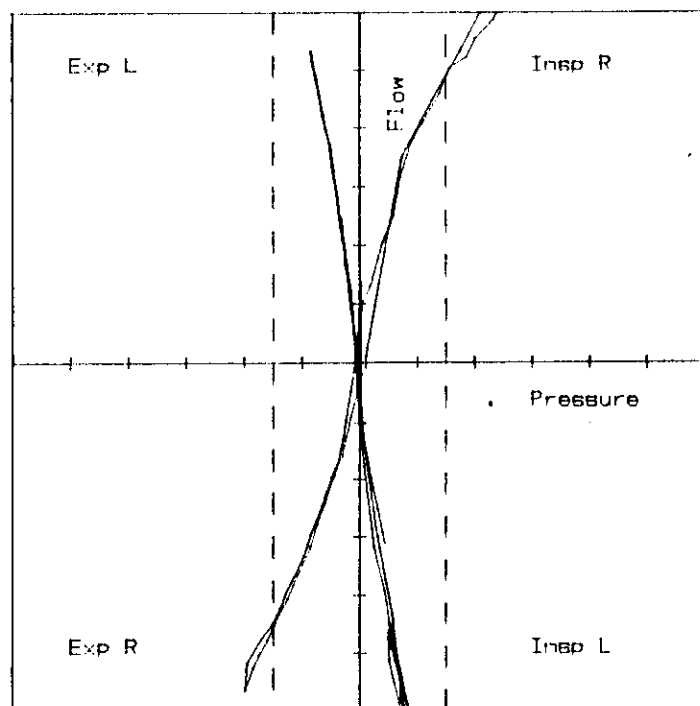
Reference No.: 1
Name: ABDEL-MONEEM MOHAMED
Date of Birth: 1-6-1928 Sex: M
Weight: 90 kg Height: 1.6 m
Test Date.Time: Sat,22 Feb 1992.11:01

Mean Res. (Pa.s/cc) Left Right

Inspiration 0.186 0.339
Max. Deviation 0.005 0.033
No. of Measurements: 3 4

Expiration 0.000 0.343
Max. Deviation 0.000 0.024
No. of Measurements: 3 3

At Reference Value: 150 Pa.
Horizontal Scale: 1 Division = 100 Pa.
Vertical Scale: 1 Division = 100 cc/s



MERCURY ELECTRONICS (SCOTLAND) LTD.

RHINOMANOMETER NR7D

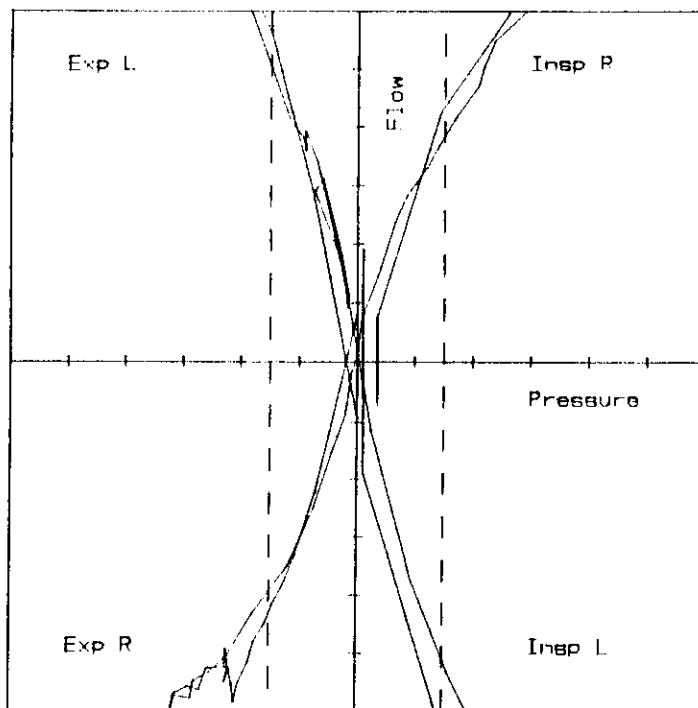
Reference No.: 1 P
Name: ABDEL-MONEN MOHAMED
Date of Birth: 1-6-1928 Sex: M
Weight: 90 kg Height: 1.6 m
Test Date.Time: Sat,07 Mar 1992.11:01

Mean Res. (Pa.s/cc) Left Right

Inspiration 0.261 0.385
Max. Deviation 0.035 0.059
No. of Measurements: 4 4

Expiration 0.288 0.392
Max. Deviation 0.015 0.017
No. of Measurements: 4 4

At Reference Value: 150 Pa.
Horizontal Scale: 1 Division = 100 Pa.
Vertical Scale: 1 Division = 100 cc/s



(II) STATISTICAL EVALUATION OF MEDICAL RESULTS

Comparison between inspiration and expiration before and after taking the drugs Using paired-t-test.

Table (1) : prazosin :

(A) Rt. nostril

Data	Inspiration before taking drug	Inspiration after taking drug	Expiration before taking drug	Expiration after taking drug
Mean	0.2169	0.3046	0.2234	0.3257
Standard diviation S.D.	0.339	0.0419	0.0217	0.0373
Range.	0.176-0.2910	0.2500-0.4010	0.1910-0.2650	0.2910-0.4130
t = 7.07 P<0.001			t = 6.9005 P<0.001	

(B) left nostril

Data	Inspiration before taking drug	Inspiration after taking drug	Expiration before taking drug	Expiration after taking drug
Mean	0.2182	0.3092	0.2240	0.2353
Standard diviation S.D.	0.0360	0.058	0.0370	0.1382
Range.	0.1820-0.2800	0.2110-0.4400	0.1890-0.2980	0.0260-0.3970
t = 6.877 P< 0.001			t = 0.2126 P< 0.05	

t = Paired-t-test

P = Probability of error.

STATISTICAL VALUE FOR RESULTS:

(I) Prazosine caused highly significant increase of nasal resistance after taking it for one month without interruption. This was showing from (p) which means the probability of error so.

In right nostril :

$P < 0.001$ i.e probability of error is decrease than 0.001 so it is highly significant results this occurred in expiration and inspiration.

In Left nostril: In inspiration $p < 0.001$ i.e. probability of error is less than 0,001 so it is highly significant results. But in expiration $p > 0.05$ ie probability of error is more than 0.05 so the results is non significant i.e. resistance of nasal airflow after taking Prazosine for left nostril expiration was not high enough to become significant value.

Table(2) captopril:

(A) Rt. nostril

Data	Inspiration before taking drug	Inspiration after taking drug	Expiration before taking drug	Expiration after taking drug
Mean	0.2607	0.3327	0.5059	0.5968
Standard diviation S.D.	0.2634	0.2627	0.6806	0.6773
Range.	0.1470-1.0000	0.2030-1.0670	0.2220-2.4400	0.3310-2.5210
$t = 5.3573$		$P < 0.001$		$t = 6.0563$
				$P < 0.001$

(B) left nostril

Data	Inspiration before taking drug	Inspiration after taking drug	Expiration before taking drug	Expiration after taking drug
Mean	0.1517	0.2522	0.2467	0.3346
Standard diviation S.D.	0.0702	0.0855	0.1307	0.1789
Range.	0.000-0.2590	0.1730-0.4160	0.000-0.3760	0.1030-0.7310
$t = 2.3635$		$P < 0.05$		$t = 2.2348$
				$P < 0.05$

 $t = \text{paired-}t\text{-test}$ $P = \text{probability of error.}$

(11) Capotopril caused highly significant increase of nasal resistance after taking it for one month without interruption. This was showing from "P" which means the probability of error so:

In right nostril

In both inspiration and expiration $p < 0.001$ i.e. probability of error is less than 0.001 so it is highly significant results.

In left nostril

In both inspiration and expiration $P < 0.05$ i.e. probability of error is less than 0.05 so it is less significant results but decrease than right nostril.

So captopril caused highly increase of nasal resistance after taking by the patient.

Table 3: Propranolol.

(A) Rt. nostril

Data	Inspiration before taking drug	Inspiration after taking drug	Expiration before taking drug	Expiration after taking drug
Mean	0.2628	0.3607	0.3016	0.4501
Standard diviation S.D.	0.0483	0.0594	0.0528	0.1752
Range.	0.1890-0.3290	0.2310-0.4340	0.2030-0.3610	0.2660-0.9190
t = 7.8369		P < 0.001		t = 2.6614
				P < 0.05

(B) left nostril

Data	Inspiration before taking drug	Inspiration after taking drug	Expiration before taking drug	Expiration after taking drug
Mean	0.2592	0.2941	0.2849	0.3498
Standard diviation S.D.	0.0492	0.0409	0.0525	0.0697
Range.	0.1770-0.3170	0.2330-0.3590	0.2010-0.3520	0.2420-0.4420
t = 4.2237		P < 0.01		t = 3.7077
				P < 0.01

t = Paired-t-test

P = probability of error.

(III) Propranolol caused highly significant increase of nasal resistance after taking it for one month without interruption. This was showing from "P" which means the probability of error so in.

Right nostril

Inspiration $p < 0.001$ i.e the probability of error is less than 0.001 so it is highly significant results. expiration $p < 0.05$ i.e the probability of error less than 0.05 so it is less significant results.

Left nostril

In both inspiration and expiration $p < 0.01$ so it is significant result.

Table (4) :Nifedipine:

(A) Rt. nostril

Data	Inspiration before taking drug	Inspiration after taking drug	Expiration before taking drug	Expiration after taking drug
Mean	0.3053	0.3662	0.3121	0.3923
Standard diviation S.D.	0.0427	0.1061	0.0560	0.2486
Range.	0.2150-0.3790	0.1650-0.6070	0.2290-0.4210	0.000-1.0130
t = 2.0892		P < 0.05		t = 1.1131
				P = 0.05

(B) lift nostril

Data	Inspiration before taking drug	Inspiration after taking drug	Expiration before taking drug	Expiration after taking drug
Mean	0.2809	0.2427	0.2972	0.3160
Standard diviation S.D.	0.2857	0.1033	0.7919	0.1203
Range.	0.1360-1.0780	0.000-0.3990	0.000-2.5450	0.2110-0.6350
t = 0.4607		P < 0.05		t = 0.0903
				P < 0.05

t = Paired-t-test

P = probability of error.

(IV) Nifedipin did not cause significant increase of nasal resistance after taking it for one month without interruption. This was showing from " P " which means the probability of error so:

in Right nostril.

Inspiration: $P < 0.05$ i.e probability of error is less than 0.05 i.e. it is less significant results.

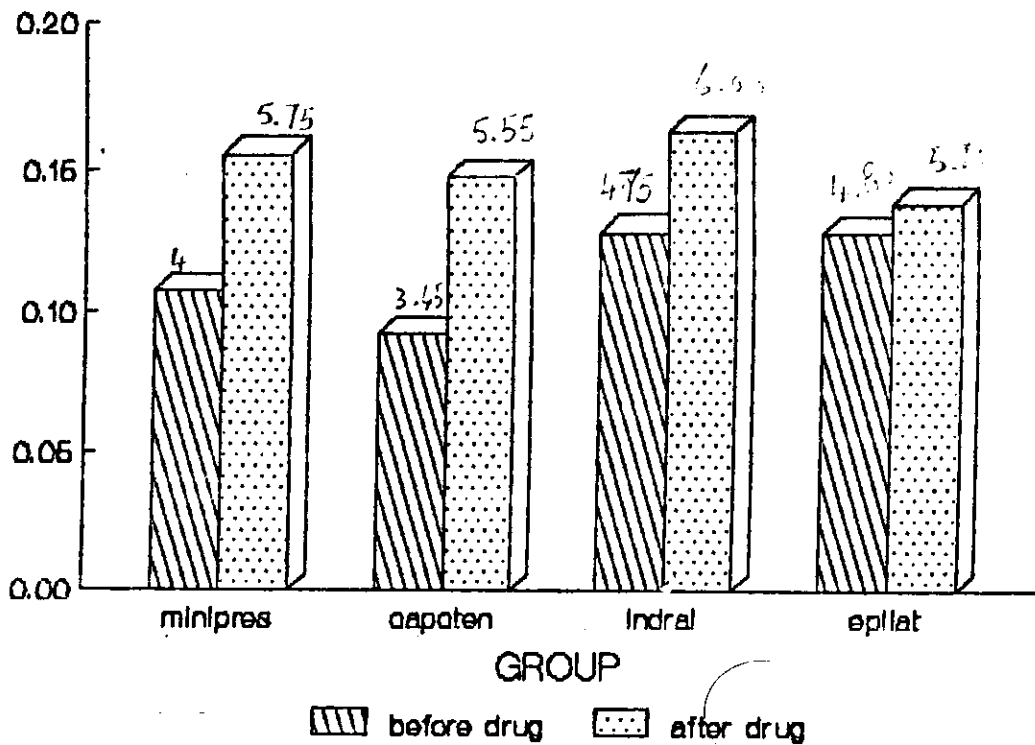
The nasal resistance of Rt. nostril in inspiration stage increased after taking the drug for one month.

In expiration $P > 0.05$ so probability of error is more than 0.05 so no significant results i.e. the nasal resistance of Rt. nostril in expiration stage did not increase after taking the drug for one month.

In left nostril.

In both expiration and inspiration $P > 0.05$ so it is non significant results i.e. the nasal resistance of Lt. nostril in inspiration and expiration stages is not increase after taking the drug for one month.

MEAN INSPIRATION RESISTANCE OF N.F. IN DIFFERENT GROUPS BEFORE&AFTER ttt



Also , a look at figures (A) and (B) will give
A comparative result of mean inspirah & expiral
resistance in / between the four groups before and after
taking the drugs .

**MEAN EXPIRATION RESISTANCE OF N.F.
IN DIFFERENT GROUPS BEFORE&AFTER ttt**

