

RESULTS

RESULTS

This study was carried on 57 cases of different diseases affecting the maxillary sinuses presented at E. N. T. Outpatient Clinic.

All patients were classified into groups according to the disease in the maxillary sinuses.

- we had group of 10 patients with allergic rhinosinusitis.
- A group of 10 patients with allergic nasal polyposis.
- A group of 10 patients with chronic maxillary sinusitis.
- A group of 10 patients with acute maxillary sinusitis.
- A group of ten patients with acute on top of chronic maxillary sinusitis.
- A group of 5 patients with epistaxis.
- One patient with inverted papilloma.
- One patient with trauma to the face involving the anterior wall of the maxillary sinus.

Regarding the group of patients with the different diseases Table 1 as shown above.

Regarding the age and sex groups Table 2.

Regarding the clinical picture which varied between headache (related to the paranasal sinuses).

Nasal obstruction (unilateral or bilateral).

Nasal discharge (watery , mucoid or mucopurulent).

Deviated nasal septum .

Tenderness over the sinus .

Polyps (allergic polypi by biopsy and microscopic examination) .

Systemic manifestations as fever , rigors , bodyache...etc

Table 3

Regarding the radiological findings which varied between :
Opaque sinus .
Thickened mucoperiosteum .
Air fluid level .
Normal sinus .

Table 4

Regarding the puncturing and pressure measurement in the maxillary sinus and whether it was done under local or general anesthesia .

Table 5

The results of pressure measurement in the maxillary sinus are all shown in Table 6 ,a ,b , c , d , e , f , g .

Regarding the pressure either positive or negative in the maxillary sinus . Table 7 .

Normal pressure was found in 27 antra which makes 29,5% of the total maxillary sinuses subjected to pressure measurement .

Negative pressure was found in 29 antra which makes 31,5% of the total maxillary sinuses subjected to pressure measurement .

Positive pressure was found in 37 antra which makes 37% of the total maxillary sinuses subjected to pressure measurement .

The number of maxillary sinuses subjected to pressure measurement was 93 sinuses .

Regarding the relation between the maxillary sinus pressure and the clinical picture . Table 8 .

The following results were found :

In 43 patients complaining of headache .

32 % of them had normal pressure in maxillary sinus .
(12 patients)

37 % of them had negative pressure in maxillary sinus .
(21 patients)

31% of them had positive pressure in maxillary sinus .
(10 patients)

In 29 patients with nasal obstruction either unilateral or bilateral :

26 % of them had normal pressure in the maxillary sinus .
(8 patients) .

71 % of them had negative pressure in the maxillary sinus .
(20 patients) .

3% of them had positive pressure in the maxillary sinus .
(One patient) .

In 30 patients with nasal discharge either watery , mucoid or mucopurulent :

52 % of them had normal pressure in the maxillary sinus
(16 patients) .

22 % of them had negative pressure in the maxillary sinus
(6 patients) .

26 % of them had positive pressure in the maxillary sinus
(8 patients) .

Regarding the the radiological findings and its correlation with the pressure measurement in the maxillary sinus .

Table 9 , a , b .

In 21 patients with opaque antrum in the X- ray film :

9,5 % of all had normal pressure (2 sinuses) .

80 % of all had negative pressure (16 sinuses) .

10,5 % of all had positive pressure (3 sinuses) .

In 26 patients with air fluid level in the maxillary sinus .

67 % of all had normal pressure in 18 sinuses .

25 % of all had negative pressure in 6 sinuses .

8 % of all had positive pressure in 2 sinuses .

In 25 patients with veiling or thickened mucoperiosteum in the maxillary sinus .

56 % of all had normal pressure in 14 sinuses .

32 % of all had negative pressure in 8 sinuses .

12 % of all had positive pressure in 3 sinuses .

Regarding the relation between the radiological findings and the clinical findings . Table 10 .

In 25 patients having thickened mucoperiosteum only in X-ray (Water `s view) .

48 % of them were complaining of headache (12 patients) .

40 % of them were complaining of nasal obstruction (10 patients) .

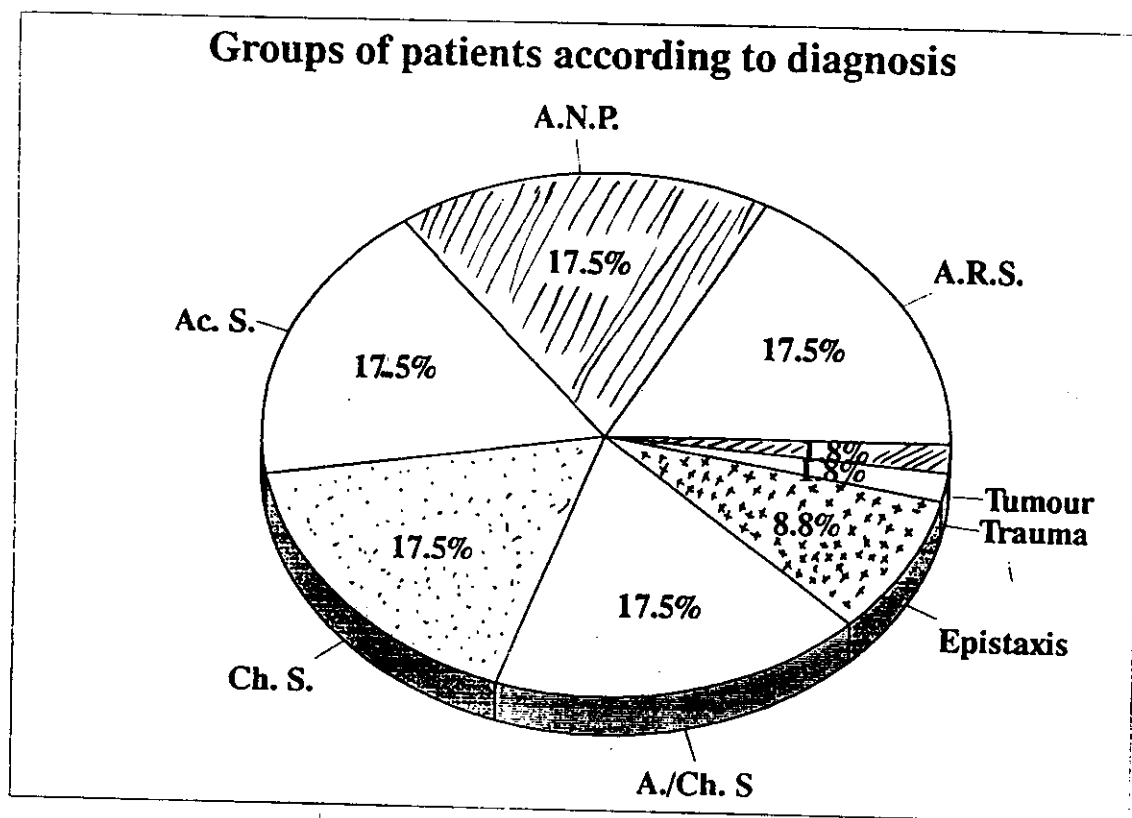
12 % of them were complaining of nasal discharge (3 patients) .

In 21 patients with opaque sinus in X - ray :
90 % of them were complaining of headache (19 patients) .
35 % of them were complaining of nasal obstruction
(8 patients) .
27 % of them were complaining of nasal discharge
(6 patients) .

In 26 patients with air fluid level in the maxillary sinus in X - ray :
70 % of them were complaining of headache (15 patients) .
40 % of them were complaining of nasal obstruction
(10 patients) .
80 % of them were complaining of nasal discharge
(20 patients) .
N.B : Apparently some of the above patients were having
more than one symptom at the same time .

In 21 patients with normal sinus in X - ray :
32 % of them were complaining of headache (6 patients) .
33 % of them were complaining of nasal obstruction
(7 patients) .
35 % of them were complaining of nasal discharge
(8 patients) .

The present study involved 57 cases, in 8 groups according to clinical diagnosis. Their distribution is shown in the following figure & table



A.R.S. : Acute Rhinosinusitis

A.N.P. : Acute Nasal Polyps

Ac. S. : Acute sinusitis

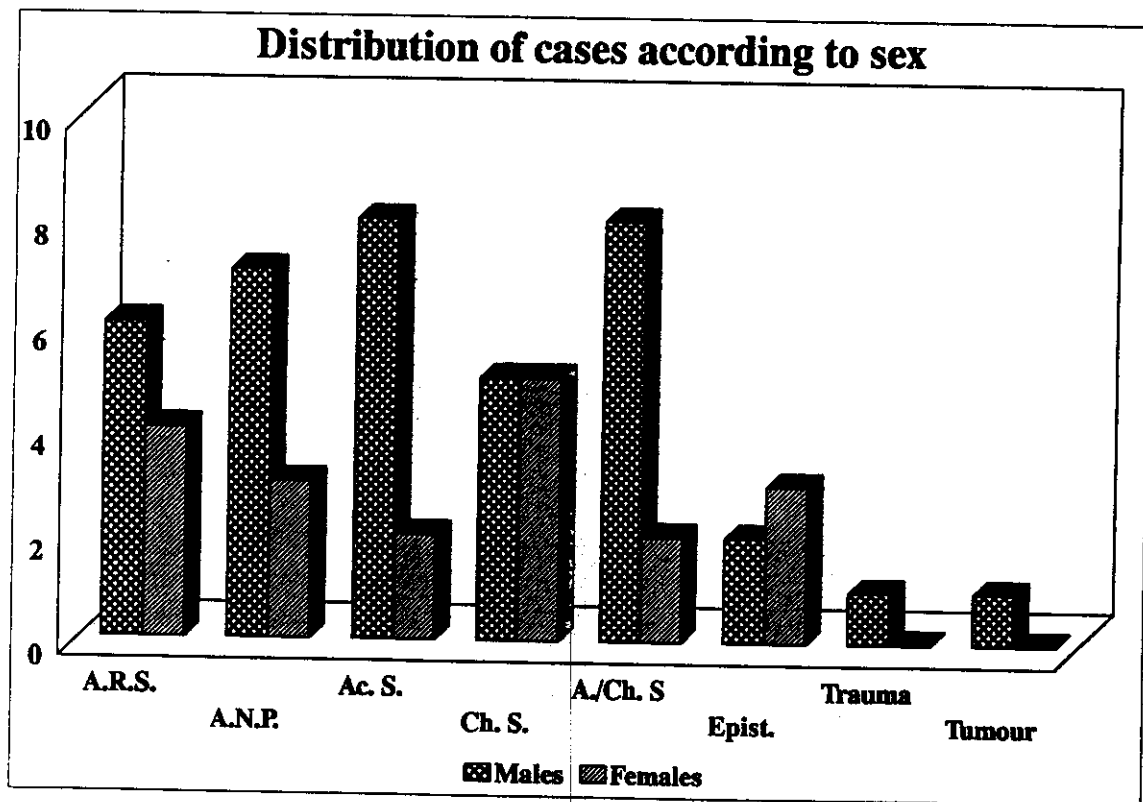
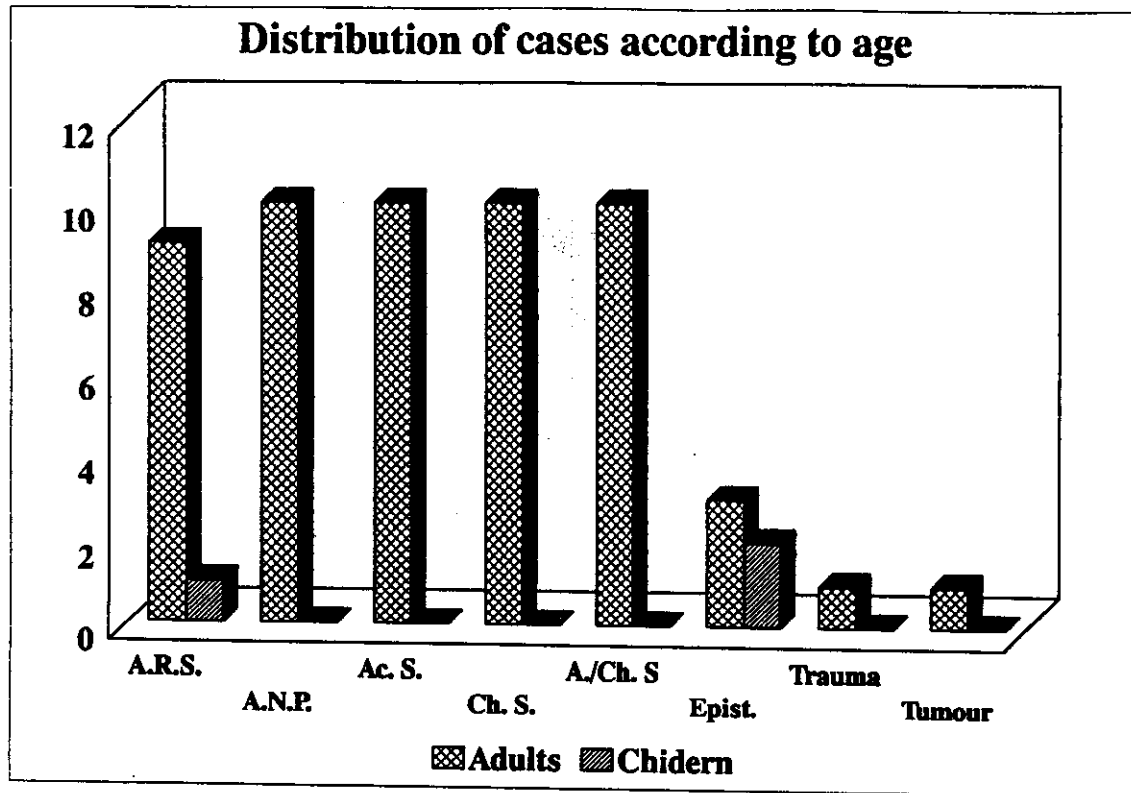
Ch. S. : Chronic sinusitis

A./Ch. S. : Acute on top of Chronic Sinusitis

Diagnosis	Allergic Rhinosin-sitis	Allergic nasal polyps	Acute sinusitis	Chronic sinusitis	Acute on top of ch. sinusitis	Epistaxis	Trauma	Tumour
case number	10	10	10	10	10	5	1	1

Table 1 : Case groups

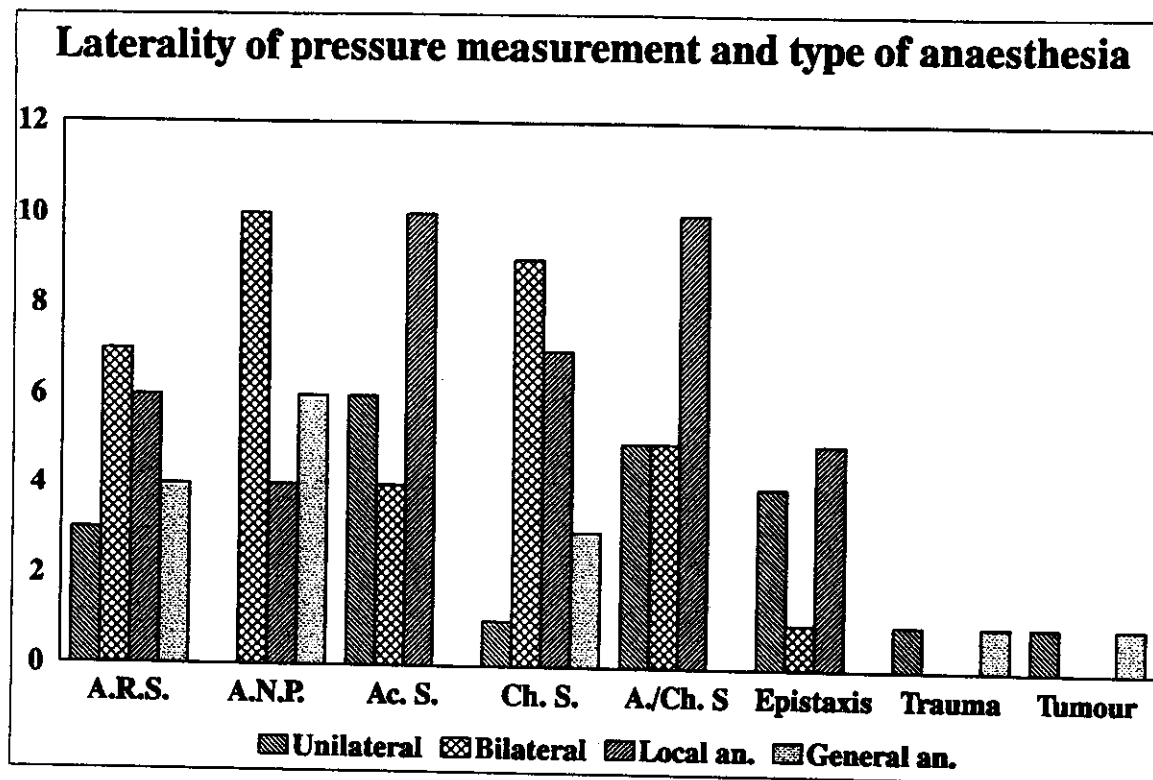
Table 1 : showing Distribution of Cases and groupings into groups according to different diseases.



A.R.S. : Acute Rhinosinusitis
A.N.P. : Acute Nasal Polyps
Ac. S. : Acute sinusitis
Ch. S. : Chronic sinusitis
A/Ch. S. : Acute on top of Chronic Sinusitis
Epist. : Epistaxis

Table 2 : showing distribution of cases according to age and Sex

III



A.R.S. : Acute Rhinosinusitis

A.N.P. : Acute Nasal Polyps

Ac. S. : Acute sinusitis

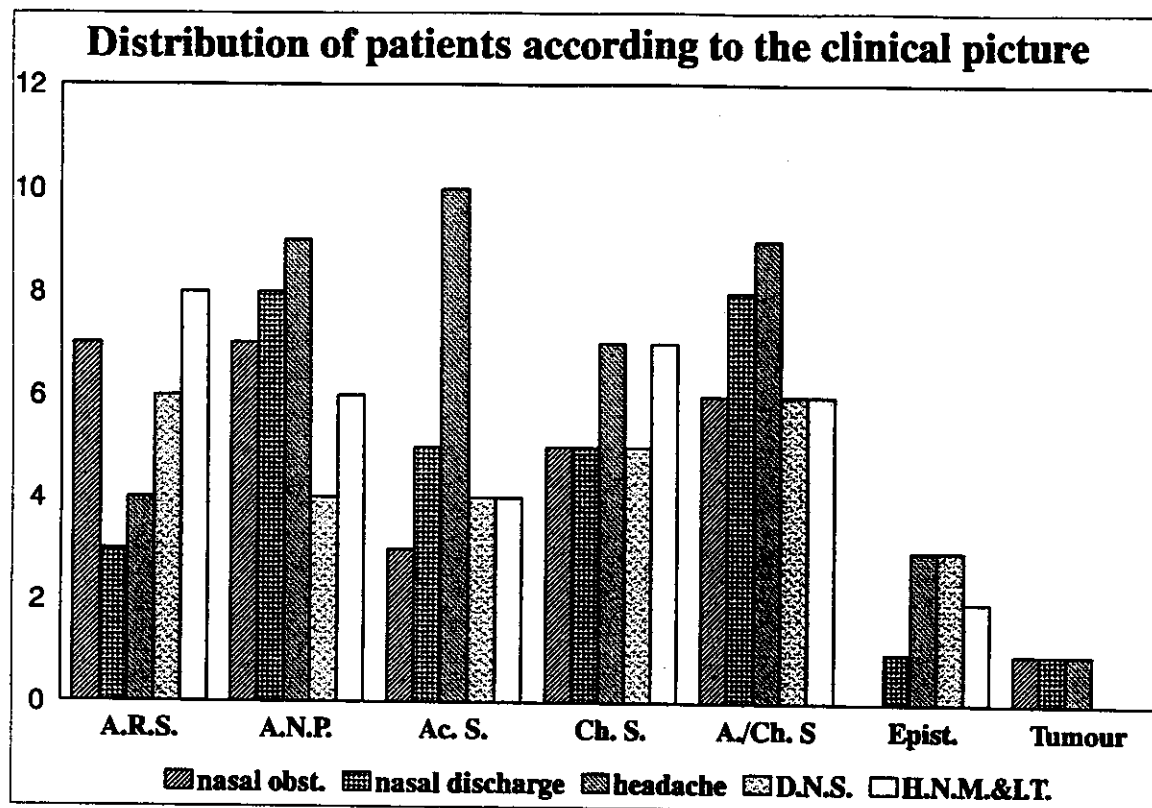
Ch. S. : Chronic sinusitis

A./Ch. S. : Acute on top of Chronic Sinusitis

	Allergic Rhinosin-sitis	Allergic nasal polyps	Acute sinusitis	Chronic sinusitis	Acute on top of ch. sinusitis	Epistaxis	Trauma	Tumour
Unilateral measure.	3	0	6	1	5	4	1	1
Bilateral measure.	7	10	4	9	5	1	0	0
Local anaesthesia	6	4	10	7	10	5	0	0
general anaesthesia	4	6	0	3	0	0	1	1

Table 2 : Pressure measurement (unilateral or bilateral) & type of Anaesthesia

Table 3 : showing Laterality of pressure measurement and type of anaesthesia .



A.R.S. : Acute Rhinosinusitis

A.N.P. : Acute Nasal Polyps

Ac. S. : Acute sinusitis

Ch. S. : Chronic sinusitis

A./Ch. S. : Acute on top of Chronic Sinusitis

Epist. : Epistaxis

D.N.S. : Deviated Nasal Septum

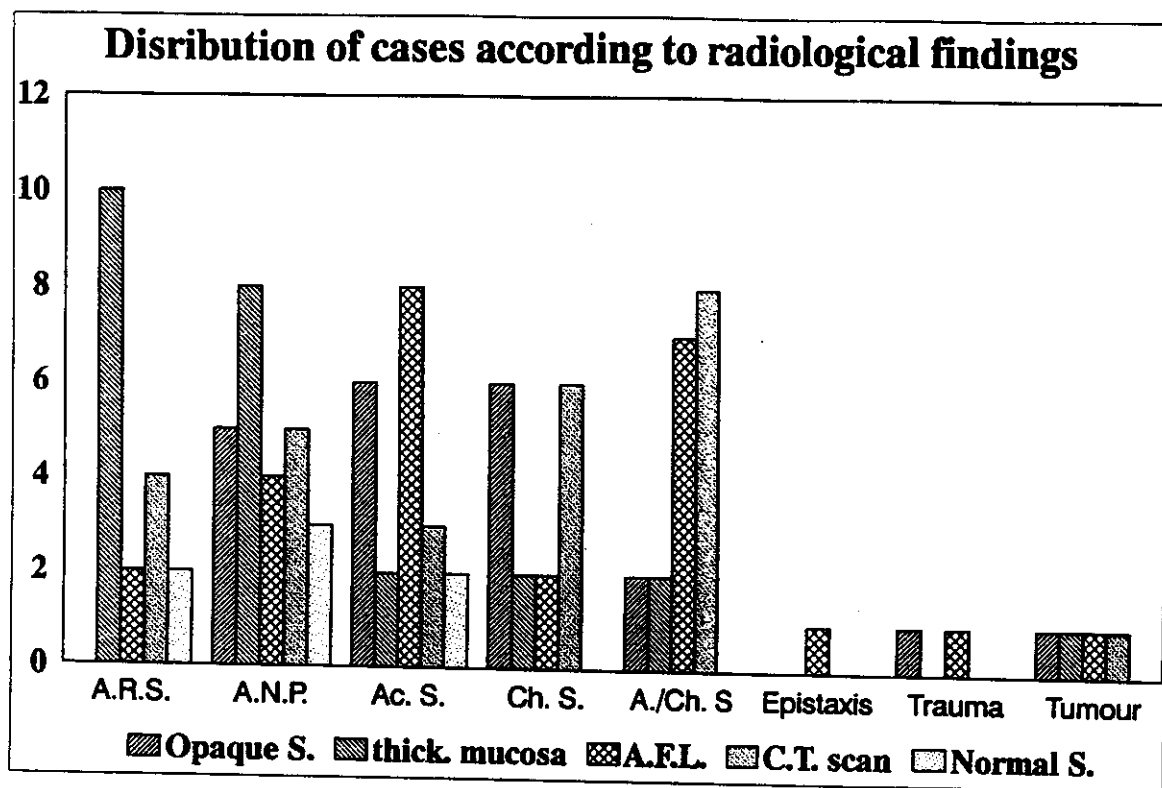
HNM & IT : Hypertrophied Nasal Mucosa & Inferior Turbinates

	Allergic Rhinosin-sitis	Allergic nasal polyps	Acute sinusitis	Chronic sinusitis	Acute on top of ch. sinusitis	Epistaxis	Trauma	Tumour
Nasal obstruct.	7	7	3	5	6	0	0	1
Nasal discharge	3	8	5	5	8	Bleeding	0	1
Headache	4	9	10	7	9	3	0	1
D.N.S.	6	4	4	5	6	3	0	0
H.N.M. & I.T.	8	6	4	7	6	2	0	0

Table : Clinical Picture

Table 4: shows distribution of patients according to Clinical picture.

N.B.: As long as more than one clinical presentation can occur in the same patient, the sum of each column of the table above is more than the actual number of cases per group.



A.R.S. : Acute Rhinosinusitis

A.N.P. : Acute Nasal Polyps

Ac. S. : Acute sinusitis

Ch. S. : Chronic sinusitis

A./Ch. S. : Acute on top of Chronic Sinusitis

A.F.L. : Air Fluid Level

	Allergic Rhinosin- sitis	Allergic nasal polyps	Acute sinusitis	Chronic sinusitis	Acute on top of ch. sinusitis	Epistaxis	Trauma	Tumour
Opaque sinus	0	5	6	6	2	0	1	1
Thickened mucosa	10	8	2	2	2	0	0	1
Air fluid level	2	4	3	2	7	1	1	1
C.T. scan findings	4	6	8	6	8	0	0	1
normal sinus	2	3	2	0	0	0	0	0

Table : Radiological Findings

Table 5 : shows distribution of cases according to radiological findings .

N.B.: As long as more than one radiological finding can occur in the same patient, the sum of each colmn of the table above is more than the actual number of cases per group.

Allergic Rhino-sinusitis

	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10
Rt antrum	+ 2.7	+ 6	0	- 2.5	- 1.5		+ 6	0	+ 4.7	
Lt antrum	+ 4.5	+ 2.9	0	- 1	+ 3	- 1.7	+ 4.5	0		+ 5.5

Table, 6 a

Allergic Rhino-sinusitis with Polyps

	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10
Rt antrum	- 5.5	- 6.7	- 5.2	- 4	- 6.3	- 7.5	- 0.75	- 4	0	0
Lt antrum	- 6.5	- 8	- 5.8	- 4.4	- 6.8	- 7.1	- 0.25	- 5	0	0

Table, 6 b

Acute Maxillary Sinusitis

	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10
Rt antrum	0	+ 15	+ 9	+ 12	+ 13	+ 14		- 3	+ 8.5	
Lt antrum	0	+ 10.7	+ 11	+ 15			+ 8.7			0

Table, 6 c

Tables 6 (from a to h): shows pressure in the sinus in each Case .

	case 1	case 2	case 3	case 4	case 5	case 6	case 7	case 8	case 9	case 10
Rt, antrum	-2	+1.2	+1.1	+1.7	0	0	-2	0	0	0
Lt, antrum	-3.5	+0.9	+1.6	+1.4	0		-4	0	0	0

Table, 6 d = chronic sinusitis

	case 1	case 2	case 3	case 4	case 5	case 6	case 7	case 8	case 9	case 10
Rt, antrum	0	-2	+14	+16		+12		-2	-3.2	0
Lt, antrum	0	0	+12		+15		+16	-4		0

Table, 6 E = Acute on top of chronic sinusitis

	case 1	case 2	case 3	case 4	case 5
Rt, antrum	0		+2.5	+1	+3
Lt, antrum	1	0		+0.5	

Table, 6 F=Epistaxis

Table 6 (from a to h): shows pressure in the sinus in each case.

	case
Rt, antrum	+1.5 to 4.5
Lt, antrum	

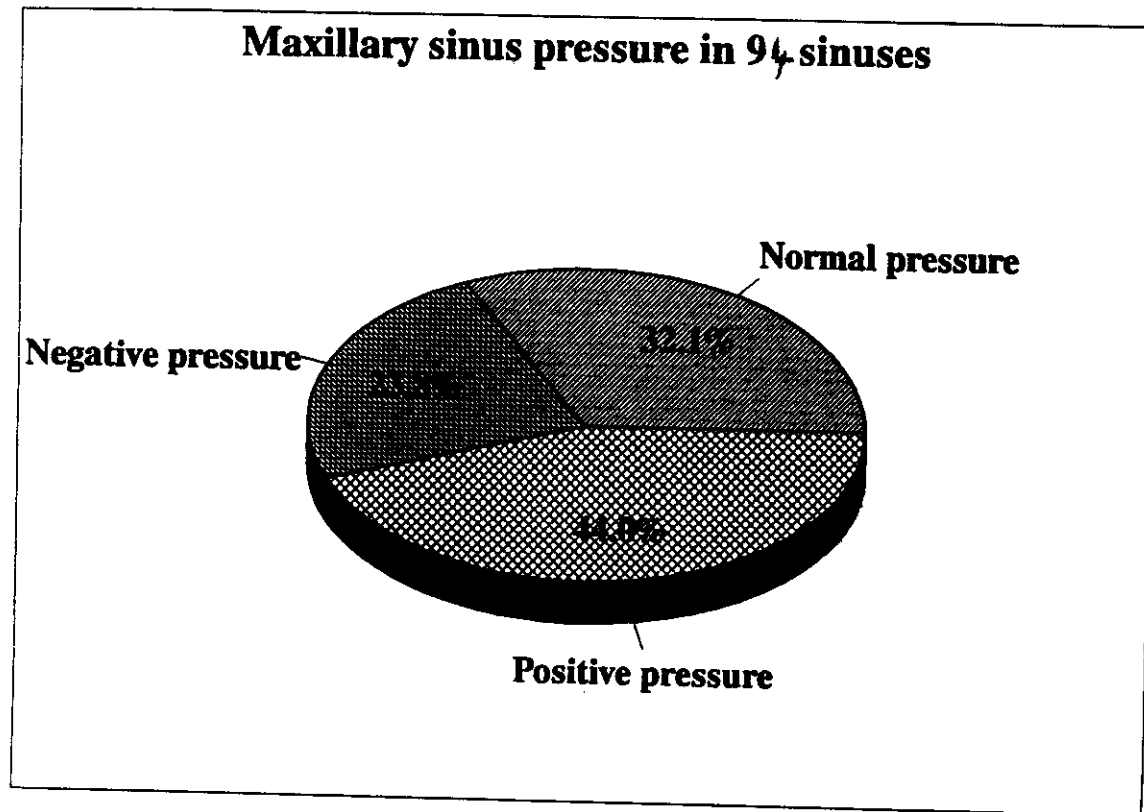
Table, 6 g = Trauma

	case
Rt. antrum	
Lt. antrum	+5

Table, 6h = Tumour

Table 6 (from abo h) = shows pressure in the sinus in each case.

*In the 57 patients, Maxillary sinus pressure was measured in 94 sinuses (both sinuses in 36 patients & a single sinus in 21 patients.)
The findings are shown in the following figure & table.*

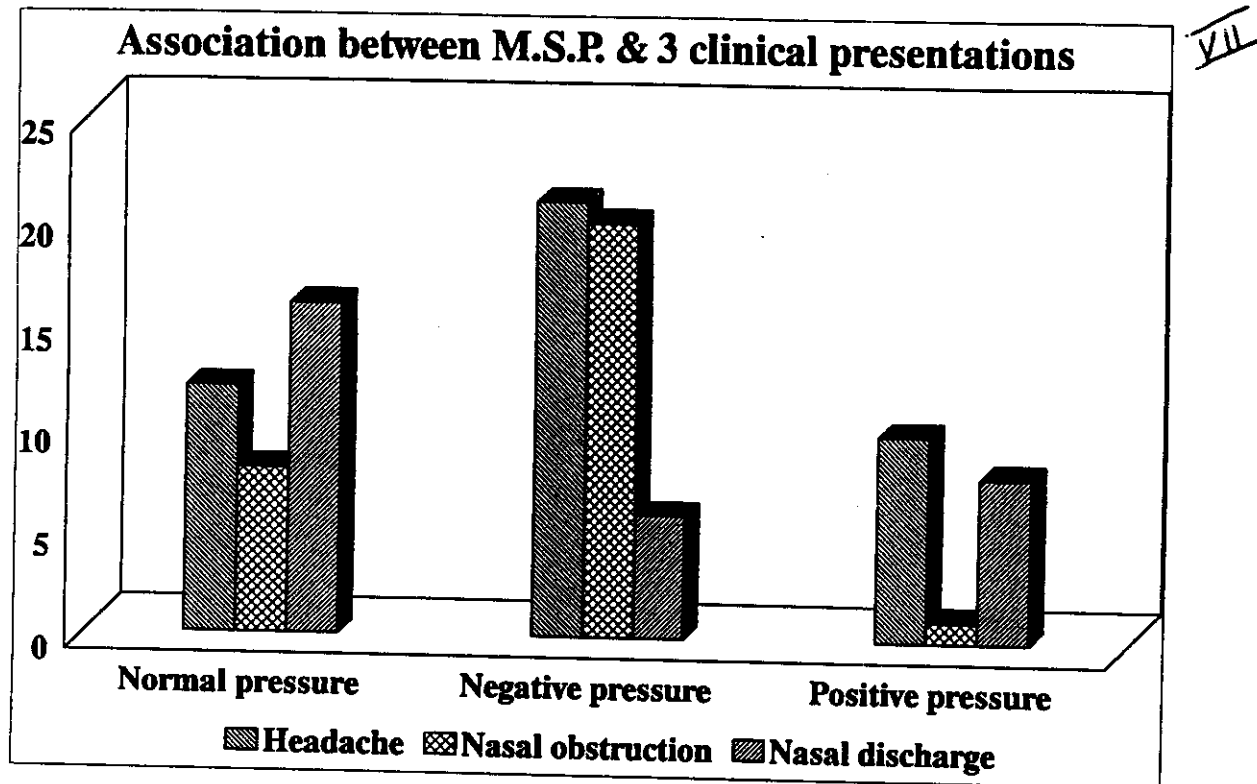


	number of maxillary sinuses	%
Normal pressure	27	32.2
Negative pressure	20	23.8
Positive pressure	37	44
Total	94	100

Table 7 : Maxillary Sinus Pressure

Table 7 : shows the results of pressure measurement .

Association between M.S.P. & 3 clinical presentations namely; headache, nasal obstruction & nasal discharge is demonstrated in the following figure & table



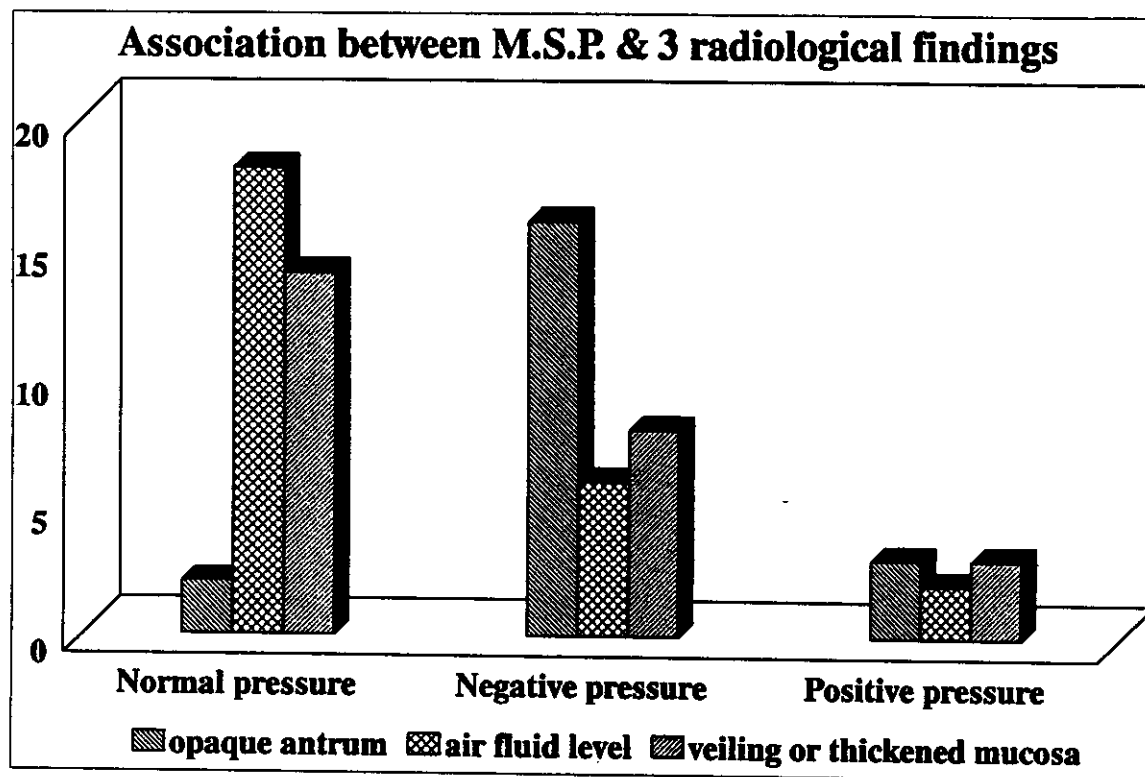
M.S.P. : Maxillary Sinus Pressure

	Headache 43cases	Nasal obstruct. 29cases	Nasal discharge 30cases
Normal pressure	12 27.90%	8 27.60%	16 53.30%
Negative pressure	21 48.80%	20 69%	6 20%
Positive pressure	10 23.30%	1 3.40%	8 26.70%

Table 8: clinical Association

Table 8 : shows clinical findings in association with pressure measurement in the sinus.

Association between M.S.P. & 3 radiological findings namely; opaque antrum, air fluid level & veiling or thickened mucosa only is demonstrated in the following figure & table.



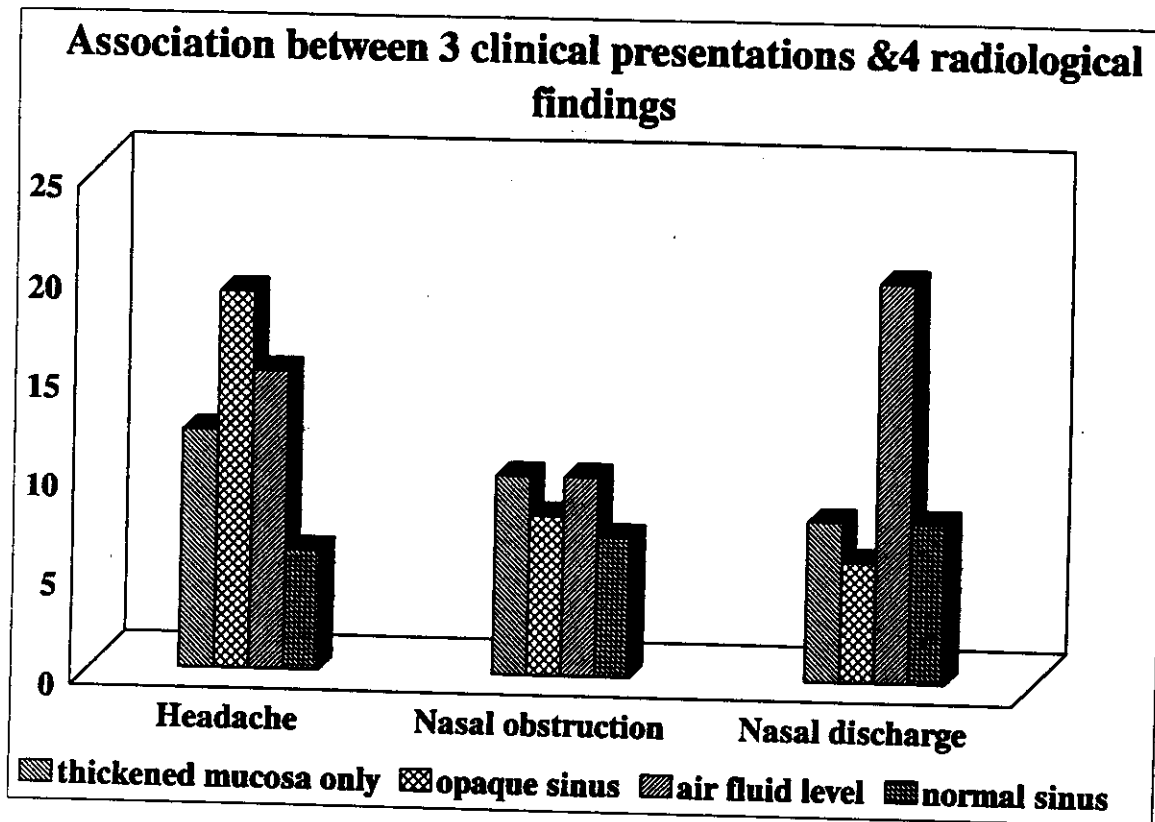
M.S.P. : Maxillary Sinus Pressure

	Opaque antrum 21cases	Air fluid level 26cases	Veiling or thick. mucosa only 25cases
Normal pressure	2 9.50%	18 69.20%	14 56.00%
Negative pressure	16 76.50%	6 23%	8 32%
Positive pressure	3 14.00%	2 7.70%	3 12.00%

Table 9 : Radiological Association

Table 9 : shows radiological findings in association with maxillary sinus pressure.

Association between 3 clinical presentations namely ; headache, nasal obstruction, nasal discharge & 4 radiological findings namely thickened mucosa only, opaque sinus, air fluid level and normal sinus is demonstrated in the following figure & table .



	Thickened mucosa only (25)	Opaque sinus 21cases	Air fluid level 26cases	Normal sinus 21cases
Headache	12 48%	19 90.50%	15 57.70%	6 28.60%
Nasal obstruct.	10 40%	8 38.10%	10 38.50%	7 33.30%
Nasal discharge	3 12%	6 28.60%	20 77%	8 38.10%

Table 10 : Association between radiological & clinical findings

N.B.: as long as a single patient with a particular X ray finding may have more than one clinical presentation, the sum of the percentages of any column in the above table may exceed 100.

Table 10 : Shows association between radiological and clinical findings .

*

MEASUREMENT OF PRESSURE

N.B : Measurement of pressure was done in 93 sinuses .

ALLERGIC RHINITIS

In 5 patients positive pressure (+2 to + 6 cm H₂O) , 50 % .

In 3 patients negative pressure (-1 to -2.5 cm H₂O) , 30 % .

In 2 patients normal pressure , 20 % .

ALLERGIC RHINITIS WITH NASAL POLYPS;

8 patients positive pressure (- 0.75 to - 8 cm H₂O) , 80 % .

2 patients normal pressure (- 0.75 cm H₂O)

ACUTE MAXILLARY SINUSITIS

7 patients positive pressure (+ 8 to 15 cm H₂O) , 70 % .

1 case negative pressure 3 cm , 10 % .

2 cases normal pressure, 20 % .

CHRONIC MAXILLARY SINUSITIS

4 cases positive pressure (+ 0.8 cm to + 1.7 cmH₂O) , 40 %

2 cases negative pressure (-2 cm and -4 cm) , 20 % .

4 cases normal pressure, 40 % .

ACUTE ON TOP OF CHRONIC SINUSITIS

5 patients positive pressure (+12 and +16 cm H₂O) , 50% .
3 patients negative pressure (-2 cm and - 4 cm H₂O) , 30 % .
2 patients normal pressure ,20% .

*

FEMALE AND MALE GENERAL OR LOCAL ANAESTHESIA

A) 10 Cases. allergic rhinitis.

6 Male

3 Females

1 Child 14 years.

Local anaesthesia : 5 males , one female.

General anaesthesia : one child , 2 ladies , one man.

B) 10 Cases: Allergic rhinitis with polyps.

7 Male

3 Femal Local anaesthesia without polypectomy

3 Males one female

Local anaesthesia with polypectomy

2 Males

General anaesthesia with polypectomy

2 Males and 2 Females.

C) 10 Cases: Acute sinusitis

Rocephine inj. I.V. before puncturing.

8 Males

2 females. all under local anaesthesia

D) 10 Cases: Chronic sinusitis

5 Males

5 Females

4 Males under local anaesthesia

3 Females under local anaesthesia

1 One Male

2 females \ under general anaesthesia.

E) 10 cases of acute on top of chronic sinusitis.

Rocephine I.V. inj. before puncturing

8 Males

2 Females

All under Local Anaesthesia.

F) Epistaxis ,Tumour and Fracture cases are discussed separately .

CASE NO: 1

AGE: 25 years

SEX: Male

NATIONALITY: U.A.E.

COMPLAINTS & HISTORY:

Heaviness in the head specially in getting up from sleep associated with nasal obstruction, Rhinorrhoea for 2 years duration, he get medical treatment for one year.

DIAGNOSIS: Allergic rhinitis

CLINICAL PICTURE :

Congested hypertrophied mucosa over both turbinates, watery discharge, slightly deviated nasal septum to the left side.

RADIOLOGICAL FINDINGS:

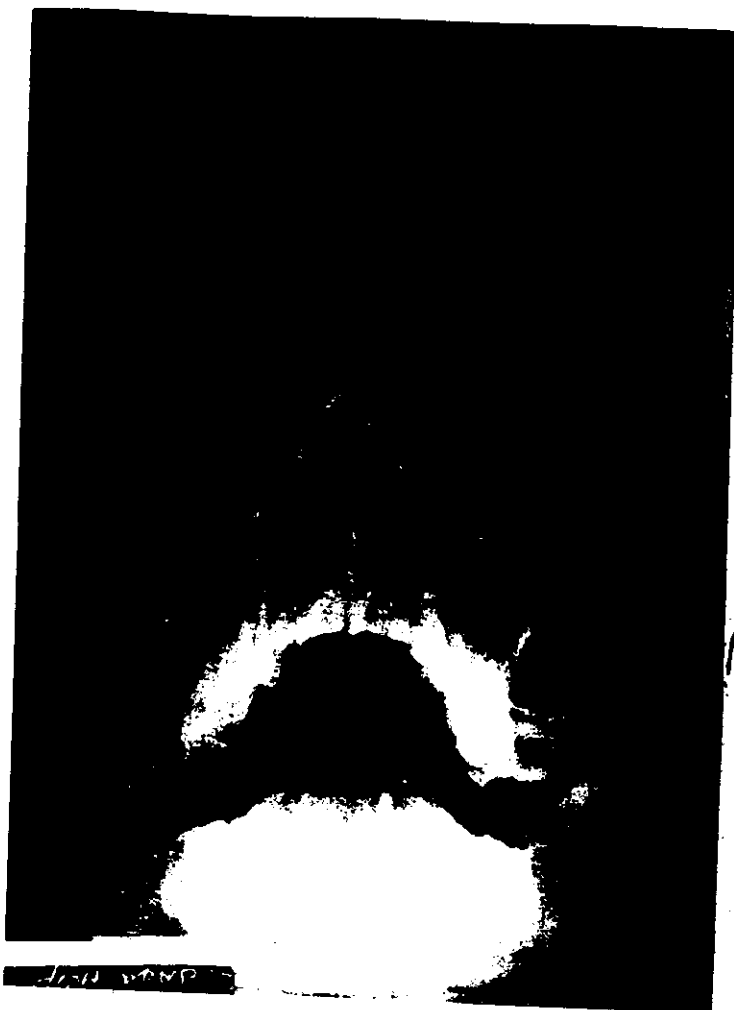
Thickened mucosa in both antra

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Bilateral antral washout and pressure measurement revealed :

Rt antrum pressure = + 2.7 cm water

Lt antrum pressure = + 4.5 cm water



Bilateral
Haziness of
both maxillary
sinus

Plate, I-A)

X-ray skull
O-M view
showing maxillary
sinuses.



X-ray skull
O-M view showing

Muco periosteal
thickening in
Lt. maxillary
antrum

(PLATE, I-B)

Σ6

(119)

CASE NO: 2

AGE : 32 Years

SEX : Male

NATIONALITY: U.A.E.

COMPLAINT & HISTORY:

Heaviness in the head associated with nasal obstruction, sneezing and rhinorrhoea for the last one year, medical treatment will give temporary improvement .

DIAGNOSIS: Allergic rhinitis.

CLINICAL PICTURE :

Hypertrophied inferior turbinates on both sides but right > left deviated nasal septum to the left sides, watery to mucoid discharge.

RADIOLOGICAL FINDINGS:

Thickened mucosa, air fluid level in the Rt. antrum

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Bilateral antral wash out and pressure measurement revealed:

Rt.antrum pressure = +6 cm water

Lt.antrum pressure = + 2.9 cm water

CASE NO: 3

AGE : 30 Years

SEX : Male

NATIONALITY: Indian.

COMPLAINTS & HISTORY;

Nasal obstruction, rhinorrhoea associated with sneezing and itching of the nose.

DIAGNOSIS: Allergic rhinitis

CLINICAL PICTURE :

Pale atrophic mucosa .

RADIOLOGICAL FINDINGS:

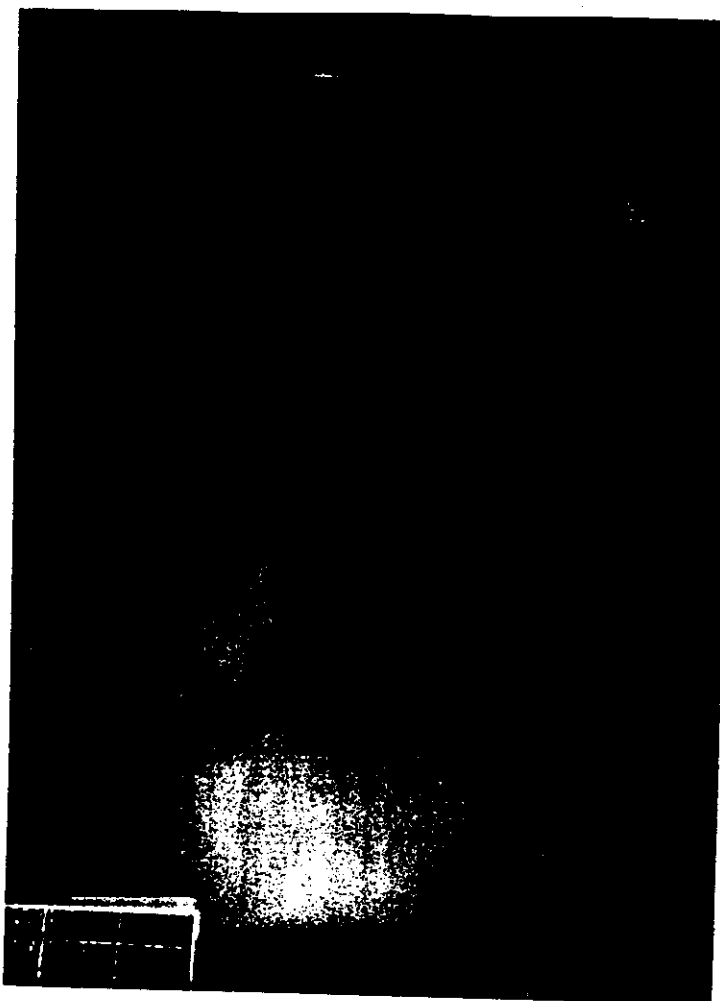
Thickened mucosa only.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Bilateral antral wash out and pressure measurement revealed

Rt. antrum pressure = 0 cm water;

Lt. antrum pressure = 0 cm water

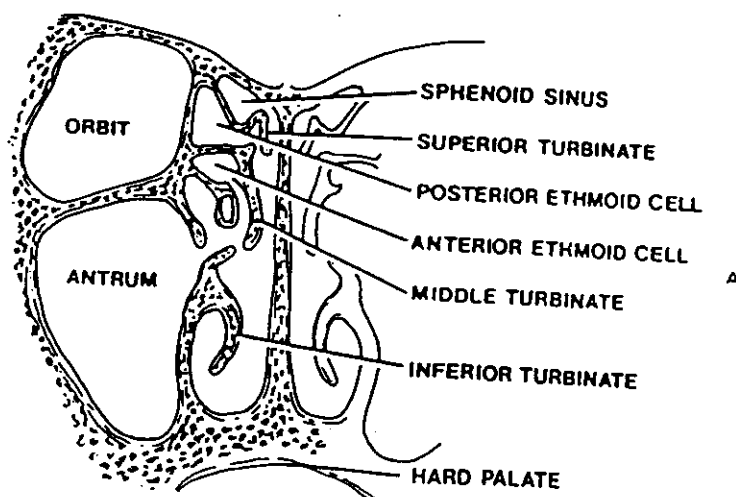


X-ray skull
O-M view

showing

Hazed both
maxillary sinuse

(Plate, 2-A)



Anatomy
by
Normal
C.T. Scan
of maxillary
sinuses

(Plate, 2-B)

CASE NO : 4

AGE : 36 years

SEX : Female

NATIONALITY: Egyptian

COMPLAINT & HISTORY:

Heaviness in head specially after getting up from sleep, associated with itching in the nose and attacks of sneezing followed by rhinorrhoea

DIAGNOSIS: Allergic rhinitis.

CLINICAL PICTURE :

Hypertrophied inferior turbinates on both sides , mucoid discharge more in the right side .

RADIOLOGICAL FINDINGS;

Thickened mucosa, air fluid level at Rt.antrum

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Bilateral antral washout and pressure measurement revealed

Rt. antrum pressure = -2.5 cm water

Lt.antrum pressure = -1 cm water

CASE NO: 5

AGE : 14 Years

SEX : Male

NATIONALITY: U.A.E.

COMPLAINT & HISTORY:

Nasal obstruction, snoring associated with running nose and attacks of sneezing early morning.

DIAGNOSIS: Allergic Rhino Sinusitis

CLINICAL PICTURE :

Congested nasal mucosa and deviated nasal septum to the left side , posterior rhinoscopy revealed hypertrophied posterior end of inferior turbinate and valvular obstruction with breathing .

RADIOLOGICAL FINDINGS:

Thickened mucosa

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Bilateral antral washout under General anaesthesia & pressure measurement revealed:

Rt.antrum pressure = -1.5 cm water

Lt.antrum pressure = + 3 cm water

N.B : The negative pressure in the right antrum is may be created by the valvular obstruction of the right side of the nose which could be the reason of snoring as well .

CASE NO : 6

AGE ; 28 Years

SEX : Female

NATIONALITY: U.A.E.

COMPLAINT & HISTORY:

Nasal obstruction associated with rhinorrhoea and itching in the nose.

DIAGNOSIS: Allergic Rhino Sinusitis

CLINICAL PICTURE :

Allergic pale mucosa with deviated nasal septum to the left side.

RADIOLOGICAL FINDINGS:

Thickened mucosa & veiling of Lt.antrum .

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Unilateral washout under local anaesthesia and pressure measurement revealed:

Lt. antrum pressure = -1.7 cm water

N.B : Actually bilateral wash out was needed but the patient tolerated one side wash only .

CASE NO: 7

AGE ; 22 Years

SEX ; Female

NATIONALITY: Syrian.

COMPLAINT & HISTORY:

Heaviness of the head associated with nasal obstruction and itching in the nose followed by attacks of sneezing in the morning.

DIAGNOSIS: Allergic Rhino Sinusitis

CLINICAL PICTURE :

Allergic mucosa and hypertrophied inferior turbinates
Rt > Lt and watery discharge .

RADIOLOGICAL FINDINGS:

Thickened mucoperiosteum,
C.T.scan shows closed Rt.ostium

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Bilateral wash under general anaesthesia & pressure measurement revealed

Rt. antrum pressure = + 6 cm water

Lt. antrum pressure = + 4.5 cm water

CASE NO: 8

AGE ; 34 Years

SEX ; Male

NATIONALITY; Egyptian

COMPLAINT & HISTORY:

Rhinorrhoea, sneezing and attacks of itching in the nose when exposed to cold air for the last 3 years.

DIAGNOSIS: Allergic rhinitis

CLINICAL PICTURE :

Slightly hypertrophied inferior turbinates but pale and atrophic mucosa with watery discharge .

RADIOLOGICAL FINDINGS:

Thickened mucosa

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Bilateral antral washout under general anaesthesia and pressure measurement revealed

Rt.antrum = 0 cm water

Lt. antrum = 0 cm water

plain X-ray
skull, o-m
or waters View
showing

Haziness both
maxillary
sinuses



(Plate, 3)

(128)

CASE NO: 9

AGE ; 23 Years

SEX ; Male

NATIONALITY; U.A.E.

COMPLAINT & HISTORY

Sneezing and rhinorrhoea patient's got medical treatment for 3 month but he is suffering for years.

DIAGNOSIS: Allergic rhinitis.

CLINICAL PICTURE :

Deviated nasal septum to the right side , hypertrophied Lt inferior turbinate .

RADIOLOGICAL FINDINGS:

Thickened mucosa

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Rt. antral washout under local anaesthesia and pressure measurement revealed

Rt. antrum pressure = + 4.7 cm water

CASE NO: 10

AGE ; 19 Years

SEX ; Male

NATIONALITY; U.A.E.

COMPLAINT & HISTORY:

Rhinorrhoea and nasal obstruction associated with attacks of sneezing on exposure to dust, medical treatment will relieve him for some times.

DIANOSIS; Allergic rhinitis.

CLINICAL PICTURE :

Slight deviation of nasal septum to the left side .

RADIOLOGICAL FINDINGS:

Lt. sinus showed veiling,

C.T.scan shows closed ostium of Lt antrum .

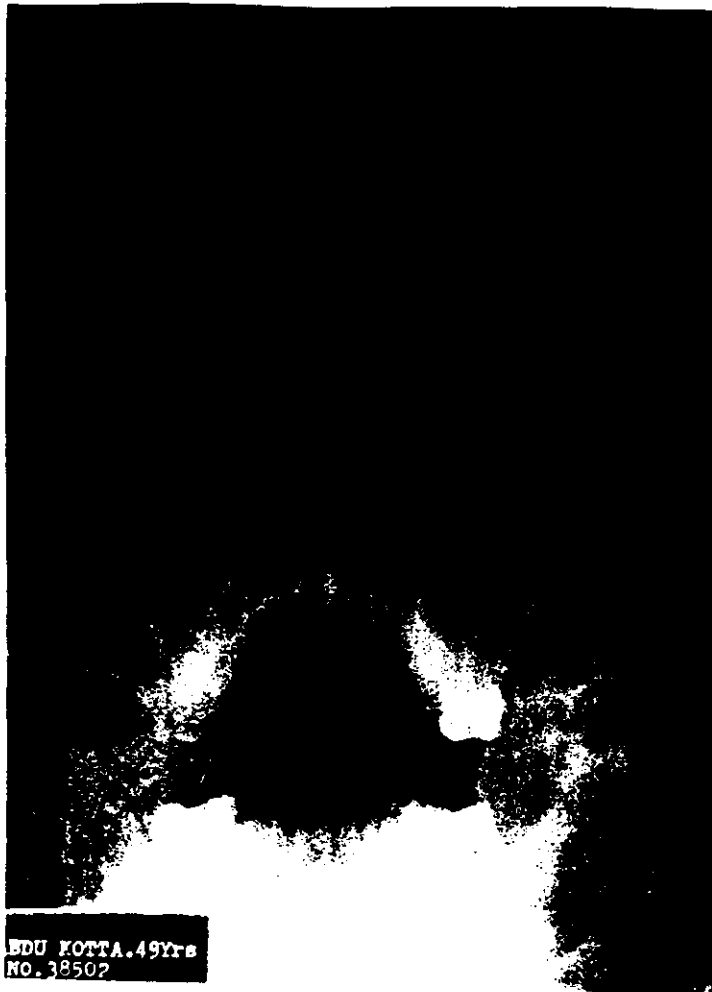
MEASUREMENT OF MAXILLARY SINUS PRESSURE;

Lt. antral washout and pressure measurement revealed pressure

pressure = + 5.5 cm water

Plain x-ray skull
o-n or waters view
showing
Veiling Rt.antrum
and polypoidal
thickening of
of Lt.antrum wall

(Plate, 4-a.)

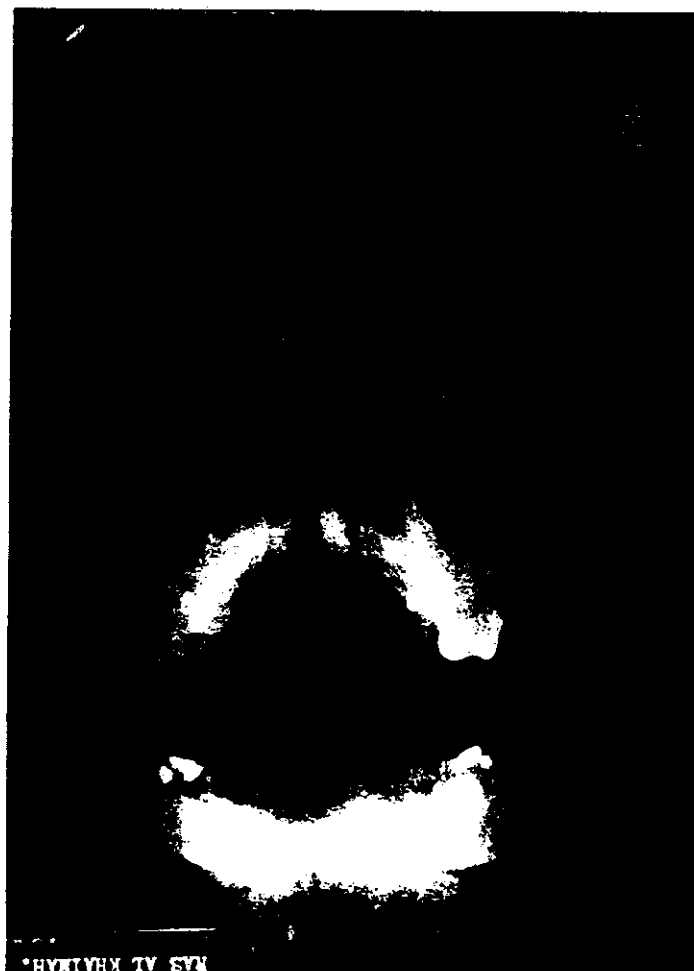


EDU KOTTA.49Yrs
No. 38502

Plain x-ray skull
o-n view
showing

Normal appearance
of all paranasal
sinuses

(Plate, 4-b.)



*HVMIVHX TV SYN

(131)

CASE NO: 11

AGE ; 20 Years

SEX ; Female

NATIONALITY; U.A.E.

COMPLAINT & HISTORY;

Heaviness in the head and nasal obstruction for the last 3 month, the patient used to put nasal decongesting drops for longtime plus sneezing and rhinorrhoea.

DIAGNOSIS; Allergic rhinitis with Bilateral polyps.

CLINICAL PICTURE :

Mild deviation of nasal septum with bilateral multiple nasal polyps .

RADIOLOGICAL FINDINGS:

Opaque both antra and C.T.Scan showed closed ostia.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Poly pectomy and Pressure measurement performed under general anaesthesia.

Rt.antrum pressure = -5.5 cm water

Lt. antrum pressure = -6.5 cm water

CASE NO: 12

AGE ; 22 Years.

SEX : Male

NATIONALITY: U.A.E.

COMPLAINT & HISTORY:

Heaviness of the head and nasal obstruction associated with rhinorrhoea, sneezing and attacks of itching in the nose for 6 months patient was given medical treatment.

DIAGNOSIS; Allergic Rhinitis with Bilateral polyps.

CLINICAL PICTURE :

Mild deviation of nasal septum , mutiple allergic polyps seen also by posterior rhinoscopy with pale allergic mucosa .

RADIOLOGICAL FINDINGS:

Opaque both antra,

C.T.Scan shows closed ostia

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Pressure measurement and polypectomy under general anaesthesia .

pressure measurement revealed

Rt.antrum pressure = - 6.7 cm water

Lt. antrum pressure = - 8 cm water.

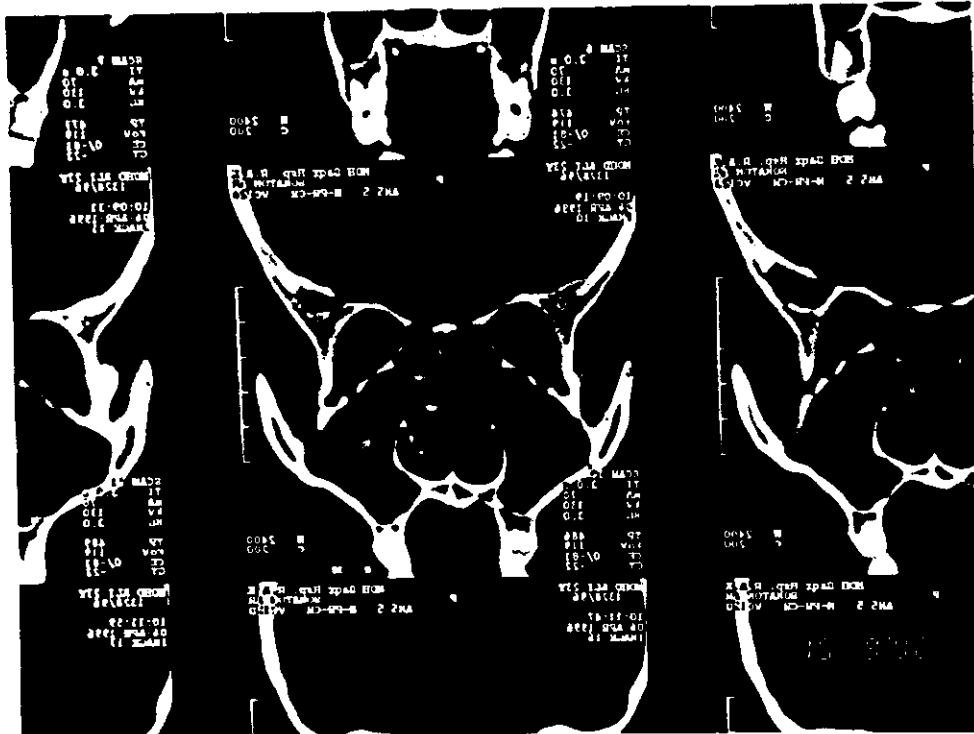


Plate 5

(Plate, 5.a)
 C.T scan
 Air fluid level
 Rt antrum
 polypoid swelling
 floor of Lt
 antrum

C.T scan Film , coronal cut

x-ray skull
 o-p view
 showing
 Hazed both
 maxillary sinuses
 Air fluid level
 Rt. antrum and
 polypoidal
 opacity in the
 floor of
 Lt. antrum

(134)

(Plate, 5 b)

CASE NO: 13

AGE : 29 Years

SEX : Male

NATIONALITY; Egyptian.

COMPLAINT & HISTORY:

Heaviness in the head and nasal obstruction associated with severe attack of rhinorrhoea and sneezing for the last 4 years, patient on nasal drops for the last one month.

DIANOSIS: Allergic rhinitis and Bilateral nasal polyps.

CLINICAL PICTURE :

Pale allergic mucosa and big single polyp in the right side with multiple allergic polyps in the left side , Rt side polyp do not extend backward in posterior rhinoscopy .

RADIOLOGICAL FINDINGS:

Opaque both antra

C.T.Scan showed closed ostia

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Pressure measurement under local anaesthesia and polypectomy also done.

Rt. antrum pressure = - 5.2 cm water

Lt. antrum pressure = --5.8 cm water

CASE NO: 14

AGE : 28 Years

SEX : Male

NATIONALITY; U.A.E

COMPLAINT & HISTORY;

Heaviness in the head specially after getting up from sleep associated with sneezing and rhinorrhoea for the last 3 month and nasal obstruction.

DIAGNOSIS: Allergic rhinitis and Bilateral nasal polyps.

CLINICAL PICTURE :

Allergic nasal polyps in both sides with excessive watery discharge .

RADIOLOGICAL FINDINGS:

Opaque antra.

C.T.scan shows ostia closed

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Measurement of pressure and polypectomy under local anaesthesia

Rt. antrum pressure = - 4 cm water

Lt. antrum pressure = - 4.4cm water

CASE NO: 15

AGE : 28 Years

SEX : Male

NATIONALITY; Egyptian.

COMPLAINT & HISTORY:

Heaviness in the head in the morning associated with nasal obstruction added to rhinorrhoea itching and sneezing which preceded the nasal obstruction long time before

DIAGNOSIS: Allergic rhinitis and bilateral nasal polyposis.

CLINICAL PICTURE :

Allergic nasal polyps more on Lt side , watery discharge .

RADIOLOGICAL FINDINGS:

Veiling in both antra

C.T.Scan shows closed ostia.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Measurement of antral pressure no polypectomy was performed.

Rt. antrum pressure = - 6.3 cm water

Lt. antrum pressure = -6.8 cm water



Plain X-ray
skull, o-M view
showing

OPAQUE
BOTH MAXILLARY
SINUSES

(Plate, 6)

(138)

CASE NO: 16

AGE ; 31 Years

SEX : Male

NATIONALITY; U.A.E.

COMPLAINT & HISTORY;

Heaviness of the head and nasal obstruction the nasal obstruction was intermittent then complete nasal obstruction for the last few weeks, rhinorrhoea & sneezing

DIAGNOSIS: Allergic Rhinitis & Bilateral Nasal Polyps.

CLINICAL PICTURE :

Allergic atrophic mucosa and allergic nasal polyps in both sides .

RADIOLOGICAL FINDINGS:

Veiling both antra

C.T.scan shows closed ostia.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Sinus pressure measurement under local.

without polypectomy .

Rt. antrum pressure = - 7.5 cm water

Lt. antrum pressure = - 7.1 cm water

CASE NO: 17

AGE : 26 Years

SEX; : Male

NATIONALITY; INDIAN.

COMPLAINT & HISTORY:

Heaviness in the head associated with nasal obstruction with sneezing and rhinorrhoea for the last 2 years, the condition is severer 3 weeks ago.

DIAGNOSIS: Allergic rhinitis with bilateral nasal polyps.

CLINICAL PICTURE :

Huge nasal polyps in both antra with mixed watery and mucoid discharge with hypertrophied posterior end of inferior turbinates .

RADIOLOGICAL FINDINGS:

Veiling both antra.

C.T.scan shows closed ostia.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Pressure measurement under local anaesthesia.

Rt. antrum pressure = - 0.75 cm water

Lt. antrum pressure = - 0.25 cm water

CASE NO: 18

AGE : 18 Years

SEX; : Female

NATIONALITY; U.A.E

COMPLAINT & HISTORY;

Heaviness in the head and rhinorrhoea associated with intermittent nasal obstruction but complete at night, the patient received medical treatment for 6 months.

DIAGNOSIS: Allergic rhinitis with nasal polyposis.

CLINICAL PICTURE :

Allergic mucosa and watery discharge ,Lt side nasal polyp

RADIOLOGICAL FINDINGS:

Veiling of both antra.

C.T.Scan shows closed ostia.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Pressure measurement under local anaesthesia without polypectomy.

Rt. antrum pressure = - 4 cm water

Lt. antrum pressure = - 5 cm water

CASE NO: 19

AGE : 22 Years

SEX : Female

NATIONALITY; EGYPTIAN.

COMPLAINT & HISTORY:

Heaviness of the head with intermittent nasal obstruction of the nose medical treatment used for 2 months.

DIAGNOSIS: Allergic rhinitis and bilateral small nasal polyps.

CLINICAL PICTURE :

Allergic mucosa and small single polyp on the Rt side and 2 small polyps on the Lt side .

RADIOLOGICAL FINDINGS:

X-ray sinuses revealed no abnormality detected.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Pressure measurement and poly pectomy under general anaesthesia revealed normal Both maxillary sinus $P=0$ cm water.

N.B : Well areated nose . At the time of pressure measurment the patient was not feeling any obstruction for the last week .

CASE NO: 20

AGE : 22 Years

SEX : Female

NATIONALITY; .U.A.E.

COMPLAINT & HISTORY:

Intermittant nasal obstruction on the Rt. sides of the nose associated with rhinorrhoea and sneezing, Rt. polypectomy performed 6 month ago.

DIAGNOSIS: Allergic rhinitis and Rt. side nasal polyposis

CLINICAL PICTURE :

Allergic pale atrophic mucosa , Rt side nasal polyps and mucoid discharge .

RADIOLOGICAL FINDINGS:

X-ray shows - normal pneumatization of maxillary sinuses.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Pressure measurement under general anaesthesia revealed normal pressure (0 cm water) in both antra.

CASE NO : 21

AGE : 19 Years

SEX : Male

NATIONALITY : U.A.E.

COMPLAINT & HISTORY :

Severe headache, following upper respiratory tract infection associated with nasal discharge.

DIAGNOSIS : Bilateral acute maxillary sinusitis.

CLINICAL PICTURE :

Hyperaemic nasal mucosa with muco-pus in both vestibules and pus in Rt middle meatus.

RADIOLOGICAL FINDINGS :

Thickened mucosa, ostium patent.

MEASUREMENT OF MAXILLARY SINUS PRESSURE :

Bilateral antral washout under local anaesthesia, under cover of antibiotic measurement of sinus pressure revealed

Rt. antrum pressure = 0 cm water

Lt. antrum pressure = 0 cm water

N.B.: The patient has good drainage of pus from sinuses which means that ostia are patent.

N.B.: In all cases of acute maxillary sinusitis, nasal swab for culture and sensitivity, then appropriate antibiotic was given, few days later pressure measurement was performed.

CASE NO: 22

AGE ; 13 Years

SEX : Male

NATIONALITY; U.A.E

COMPLAINT & HISTORY:

Severe headache in the forehead and both temples following URT infection associated with pain and tenderness over both antra and nasal discharge.

DIAGNOSIS: Bilateral acute maxillary sinusitis.

CLINICAL PICTURE :

Hyperaemic nasal mucosa ,hypertrophied inferior turbinates , pus in middle meatuses .

RADIOLOGICAL FINDINGS:

Air fluid level Rt. > Lt.

C.T.scan shows closed ostium.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Bilateral antral washout pressure measurement revealed

Rt. antrum pressure = + 15 cm water

Lt. antrum pressure = + 10.7 cm water



Plain x-ray skull
O-M view
showing

Hazed maxillary
sinuses with
Air fluid
level on
both side.

(Plate, 7)

(146)

CASE NO : 23

AGE : 28 Years

SEX : Male

NATIONALITY: INDIAN.

COMPLAINT & HISTORY:

Following URT infection, headache in both temples associated with pain and tenderness over both maxillary sinuses and nasal discharge.

DIAGNOSIS: Bilateral acute maxillary sinusitis.

CLINICAL PICTURE :

Congested nasal mucosa , posterior rhinoscopy revealed scanty pus over inferior turbinates (Rt > Lt) .

RADIOLOGICAL FINDINGS:

Air fluid level in both antra

C.T.scan shows closed ostium.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Bilateral antral washout & pressure measurement revealed

Rt. antrum pressure = + 9 cm water

Lt. antrum pressure = + 11 cm water

N.B : Drainage of pus is more at Rt side that is why pressure is more at the Lt side .

CASE NO: 24

AGE ; 35 Years

SEX : Male

NATIONALITY; EGYPTIAN.

COMPLAINT & HISTORY:

Severe headache and nasal discharge and pain with tenderness over both maxillary antrum few days after upper respiratory tract infection where the patient did not take any treatment.

DIAGNOSIS: Bilateral acute maxillary sinusitis.

CLINICAL PICTURE :

Hyperaemic nasal mucosa and no pus neither posterior nor anterior .

RADIOLOGIAL FINDINGS:

Air fluid level in both antra.

C.T.Scan shows closed ostia.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Bilateral antral wash out and pressure measurement revealed

Rt.antrum pressure = + 12 cm water

Lt. antrum pressure = + 13 cm water

N.B : Drainage is bad that is why pressure increased in both antra .

CASE NO : 25

AGE : 19 Years

SEX : Male

NATIONALITY; U.A.E

COMPLAINT & HISTORY:

Headache, which will become severe in the morning associated by nasal discharge the patient had treatment for upper respiratory tract infection one week ago.

DIAGNOSIS: Acute Rt. maxillary sinusitis.

CLINICAL PICTURE :

Deviated nasal septum to the Rt side , pus is seen only by posterior rhinoscopy in Rt side .

RADIOLOGICAL FINDINGS:

Opaque Rt. antrum.

C.T.scan shows closed ostium.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Rt. antral washout and pressure measurement revealed:
pressure = + 13 cm water.

CASE 25

Plain X-ray skull
waters view
showing

(PLATE, 8 - a)
Bilateral mucoperiosteal
thickening in both maxillary sinuses.



Plain X-ray skull
O-M view
showing

(PLATE, 8 - b)

Opaque Rt maxillary sinus .
Thickening of Lt maxillary
antrum (floor) .

(150)

11-11-11 11:11:11

CASE NO: 26

AGE ; 40 Years

SEX ; Male

NATIONALITY; U.A.E

COMPLAINT & HISTORY:

Common cold, followed by headache of acute onset, pain over Rt. antrum referred to Rt. temporal bone and in between the eyes.

DIAGNOSIS: Acute Rt. maxillary sinusitis.

CLINICAL PICTURE :

Congested mucosa , scanty pus in the Rt middle meatus , deviated nasal septum .

RADIOLOGICAL FINDINGS:

Nearly complete opacity of Rt. antrum and Rt. ethmoid air cells.

Air fluid level in the Rt frontal sinus .

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Rt. antral wash out and pressure measurement revealed:

Rt. antrum pressure = + 14 cm water.



(Plate , 9)
X-ray Skull, O.M. View
showing
Hazed Rt.

maxillary

antrum.

normal Lt.

maxillary antrum.

(152)

CASE NO: 27

AGE ; 22 Years

SEX : Male

NATIONALITY; U.A.E

COMPLAINT & HISTORY:

Pain and tenderness over Lt. antrum and headache following upper respiratory tract infection.

DIAGNOSIS: Acute Lt. maxillary sinusitis.

CLINICAL PICTURE :

Hyperaemic mucosa , severe deflected nasal septum to Lt side .

RADIOLOGICAL FINDINGS:

Air fluid level of Lt. antrum,
C.T.scan shows closed ostium.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Lt. antral wash out and pressure measurement revealed:
Lt. antrum pressure = + 8.7 cm water.

CASE NO : 28

AGE ; 22 Years

SEX : Male

NATIONALITY; U.A.E.

COMPLAINT & HISTORY:

Fever prolonged after upper respiratory tract infection associated with severe headache, pain and tenderness over Rt. antrum.

DIAGNOSIS: Acute Rt. pan sinusitis.

CLINICAL PICTURE :

Congested mucosa , deviated nasal septum to Rt side (s- shaped) , hypertrophied Lt inferior turbinate .

RADIOLOGICAL FINDINGS:

Air fluid level (but very little) in the Rt antrum & opaque ethmoids on the same side.

confirmed by C.T.scan which showed also closed ostium.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Rt. antral wash out under local anaesthesia and pressure measurement revealed:

Rt.antrum pressure = - 3 cm water.

CASE NO : 29

AGE ; 29 years

SEX : Female

NATIONALITY; EGYPTIAN.

COMPLAINT & HISTORY:

Fever and headache and pain with tenderness over Rt. frontal sinus, patient had upper respiratory tract infection 10 years ago.

DIAGNOSIS: Acute Rt. pan sinusitis.

CLINICAL PICTURE :

Deviated nasal septum to Rt side , postnasal discharge

RADIOLOGICAL FINDINGS:

Air fluid level of Rt. frontal sinus & opaque Rt. antrum.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

C.T.Scan confirmed & showed closed ostium

Rt. antral washout under local anaesthesia revealed:

Rt. antral pressure = + 8.5 cm water.

CASE NO : 30

AGE ; 18 Years

SEX : Female

NATIONALITY;

COMPLAINT & HISTORY:

Headache was continuous for the last 2 days which occurred few days after upper respiratory tract infection, pain is frontal and to the Lt. temple.

DIAGNOSIS: Acute maxillary sinusitis.

CLINICAL PICTURE :

Pus in the nose , postnasal muco-pus , hypertrophied inferior turbinates .

RADIOLOGICAL FINDINGS:

Thickened mucosa, veiling of Lt. frontal sinus.

C.T.Scan shows patent ostium, but normal Lt.frontal sinus.

MEASUREMENT OF MAXILLARY SINUS PRESSURE;

Lt. antral washout revealed:

Lt. antrum pressure = 0 cm water

CASE NO: 31

AGE ; 32 Years

SEX : Male

NATIONALITY; EGYPTIAN.

COMPLAINT & HISTORY:

Headache patient complains of gradual onset of headache for the last 2 month, history of a previous attack of acute maxillary sinusitis 6 month ago.

DIAGNOSIS: Chronic maxillary sinusitis.

CLINICAL PICTURE :

Congested nasal mucosa ,hypertrophied inferior turbinates ,slight deviation of the nasal septum to the Lt side ,scanty muco-purulent discharge.

RADIOLOGICAL FINDINGS:

Thickened mucosa.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Bilateral antral washout under general anaesthesia and pressure measurement revealed:

Rt. antrum pressure = - 2 cm water

Lt. antruim pressure = - 3.5 cm water

CASE NO : 32

AGE ; 28 Years

SEX : Male

NATIONALITY; U.A.E.

COMPLAINT & HISTORY;

Headache on both sides of the nose radiating to both temples specially after getting up from sleep, nasal discharge specially post nasally.

DIAGNOSIS; Bilateral chronic maxillary sinusitis.

CLINICAL PICTURE :

Hypertrophied inferior turbinates , scanty nasal discharge , postnasal discharge .

RADIOLOGICAL FINDINGS:

Air fluid level in both antra.? polypoid appearance .

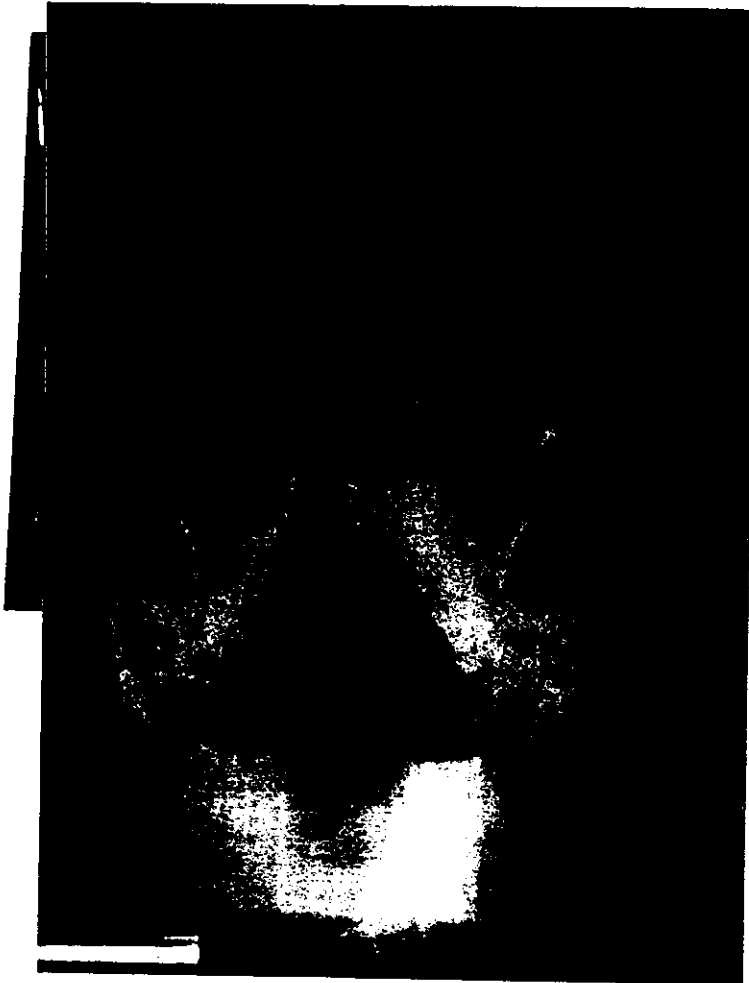
C.T.Scan shows closed ostium.(air fluid level) .

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Bilateral wash out under local anaesthesia and pressure measurement revealed:

Rt. antrum pressure = 1.2 cm water.

Lt. antrum pressure = + 0.9cm water.



Plain X-ray skull
O-M view
showing

(PLATE, 10)
Rounded density in both
maxillary sinuses.
the picture of polyps or
retention cyst

(159)

CASE NO ; 33

AGE ; 27 Years

SEX : Male

NATIONALITY; INDIAN.

COMPLAINT & HISTORY:

Different degrees of headache which varies from light headache to severe one. Postnasal discharge and foul smell in the mouth , now patient complains of cough and expectoration for more than 3 weeks.

DIAGNOSIS: Bilateral chronic maxillary sinusitis.

CLINICAL PICTURE :

Hypertrophied congested inferior turbinates , excessive purulent discharge in the middle meatus and postnasally , laryngeal examination revealed pooling of mucopus .

RADIOLOGICAL FINDINGS;

Air fluid level and thickened mucosa of both antra.

X- ray chest (of chronic bronchitis) .

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Bilateral antral washout under local anaesthesia and pressure measurement revealed:

Rt. antrum pressure = + 1.1 cm water.

Lt. antrum pressure = + 1.6 cm water.

CASE NO : 34

AGE ; 13 Years

SEX : Male

NATIONALITY: U.A.E.

COMPLAINT & HISTORY;

Cough and expectoration for the last 2 weeks associated with recurrent headache in the morning, nasal obstruction & discharge which started whitish then yellowish with bad smell.

DIAGNOSIS: Bilateral chronic maxillary sinusitis.

CLINICAL PICTURE :

Slight deviation of the nasal septum to Lt side , hypertrophied inferior turbinates , mucopus in the nose and postnasally .

RADIOLOGICAL FINDINGS:

Veiling of both antra.(Lt> Rt)

C.T.Scan shows closed ostium.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Bilateral antral washout under local anaesthesia and pressure measurement revealed:

Rt. antrum pressure = + 1.7 cm water

Lt. antrum pressure = + 1.4 cm water

(161)

CASE 34

Plain x-ray skull
o-m view
showing

(PLATE . 11-a)
Bilateral mucoperiosteal
thickening, the picture of chronic
maxillary sinusitis.



has 2nd
42
2-6

Plain x-ray skull
o-m view:
showing

(PLATE . 11-b)
Bilateral veiling of maxillary
sinuses due to thickened
mucoperiosteum.



(162)

CASE NO : 35

AGE : 25 Years SEX : Male

NATIONALITY; U.A.E

COMPLAINT & HISTORY:

Headache, nasal discharge and nasal obstruction associated with cough and expectoration for the last few days. The patient is getting attacks of diminished hearing and tinnitus in both ears.

(Rt. > Lt. due to Eustachian dysfunction.

DIAGNOSIS; Bilateral chronic maxillary sinusitis & Eust. dysfunction.

CLINICAL PICTURE :

Hypertrophied inferior turbinates , pus in the Rt middle meatus and postnasally , posterior rhinoscopy revealed pus around Eustachian tube opening , Rt ear examination revealed retracted ear drum .

RADIOLOGICAL FINDINGS;

Veiling of both antra with thickened mucosa.

MEASUREMENT OF MAXILLARY SINUS PRESSUR

Bilateral antral washout and pressure measurement revealed normal pressure = 0 cm water in both antra.

N.B : Wide nose with good nasal air way and good drainage of pus .

CASE NO : 36

AGE ; 37 Years

SEX ; Female

NATIONALITY; Egyptian .

COMPLAINT & HISTORY:

Headache, cough and expectoration for the last 2 weeks, patient had so many medical treatment but no improvement. Also nasal obstruction & nasal discharge + Rt.side Eustachian dysfunction which gives Rt.ears symptoms.

DIAGNOSIS; Chronic maxillary sinusitis with Rt. Eust. dysfunction.

CLINICAL PICTURE :

Hypertrophied Rt inferior turbinate , postnasal discharge , pus around Rt Eustachian orifice , Rt ear examination revealed congested ear drum and fluid behind .

RADIOLOGOICAL FINDINGS;

Veiling both antra.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Rt. antral washout under local anaesthesia and pressure measurement :

Rt. antrum pressure = 0 cm water.

CASE NO : 37

AGE ; 40 Years SEX : Male

NATIONALITY : U.A.E.

COMPLAINT & HISTORY:

Headache, nasal discharge and nasal obstruction.

The condition started with gradual onset of nasal obstruction associated with bitemporal headache followed by nasal discharge.

DIAGNOSIS: Bilateral chronic maxillary sinusitis.

CLINICAL PICTURE :

Deviated nasal septum to the Lt side , hypertrophied inferior turbinates , scanty mucopus in the middle meatus .

RADIOLOGICAL FINDINGS:

Veiling both antra.

C.T.Scan shows closed ostium (obstruction of osteomeatal complex)

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Bilateral antral washout and pressure measurement revealed. Rt. antrum pressure = - 2cm water

Lt. antrum pressure = - 4 cm water

CASE NO: 38

AGE ; 29 Years

SEX ; Female

NATIONALITY; U.A.E.

COMPLAINT & HISTORY:

Nasal obstruction, slight heaviness of the head. Pt. complained of recurrent attacks of headache and nasal discharge before, but now for the last 6 months she complains of nasal obstruction & persistent heaviness of the head.

DIAGNOSIS: Chronic maxillary sinusitis.

CLINICAL PICTURE :

No tenderness over maxillary sinuses , congested nose , wide nose and mucoid discharge .

RADIOLOGICAL FINDINGS:

Veiling of both antra and thickened mucosa.

C.T.Scan shows patent ostia.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Bilateral antral washout under local anaesthesia and pressure measurement revealed normal pressure in both antra 0 cm water.

CASE NO: 39

AGE ; 22 Years

SEX : Female

NATIONALITY; U.A.E.

COMPLAINT & HISTORY:

Heaviness of the head, intermittent severe headache and nasal obstruction with foul odour in the mouth.

DIAGNOSIS: Chronic maxillary sinusitis.

CLINICAL PICTURE :

Congested nose , excessive postnasal mucopurulent discharge .

RADIOLOGICAL FINDINGS:

Veiling of both maxillary sinuses,

C.T. Scan shows patent ostia.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Bilateral antral washout and pressure measurement under general anaesthesia revealed: 0 cm water in both antra.

CASE NO : 40

AGE ; 18 Years

SEX ; Female

NATIONALITY; U.A.E

COMPLAINT & HISTORY:

Heaviness of the head specially in the morning. Pt. complains of bad smell in the nose. Patient had history of acute sinusitis before 4 month but no proper treatment was given.

DIAGNOSIS; Chronic maxillary sinusitis.

CLINICAL PICTURE :

Slight deviation of nasal septum , hypertrophied mucosa over the septum and inferior turbinates , no discharge .

RADIOLOGICAL FINDINGS;

Thickened mucosa only.

MEASUREMENT OF MAXILLARY SINUS PRESSURE;

Bilateral antral washout and pressure measurement under general anaesthesia revealed normal pressure 0 cm water in both antra.

CASE NO : 41

AGE : 20 Years - SEX : Male

NATIONALITY : U.A.E.

COMPLAINT & HISTORY :

Severe headache and pain with tenderness over both antra with history of chronic maxillary sinusitis and recurrent attacks of acute exacerbation.

DIAGNOSIS : Acute on top of chronic bilateral maxillary sinusitis.

CLINICAL PICTURE :

Hyperaemic nasal mucosa, excessive pus anteriorly and posteriorly.

RADIOLOGICAL FINDINGS :

Veiling and thickened mucosa.

C.T.Scan shows patent ostia.

MEASUREMENT OF MAXILLARY SINUS PRESSURE :

Bilateral antral washout under local anaesthesia and measurement revealed normal pressure (0 cm water) in both antra.

N.B.: Patient ostia at the time of C.T. scan does not mean that it will be patent all the time because when ostium closes the symptoms are accentuated.

N.B.: In all cases of acute on top of chronic maxillary sinusitis, nasal swab for culture and sensitivity then appropriate antibiotic was given, few days later pressure measurement was performed.

CASE NO : 42

AGE : 48 Years SEX : Female

NATIONALITY; INDIAN.

COMPLAINT & HISTORY;

Severe headache at Rt. temple and pain with tenderness over Rt. antrum, nasal discharge and history of chronic maxillary sinusitis for the last one year.

DIAGNOSIS; Rt. acute on top of chronic maxillary sinusitis.

CLINICAL PICTURE :

Mild deviation of nasal septum to the Rt side , hypertrophied inferior turbinates enlarged posterior end of Rt inferior turbinate , little postnasal discharge .

RADIOLOGICAL FINDINGS;

Veiling of Rt. antrum and Lt.antrum : no abnormality detected.

C.T.Scan shows closed ostium.

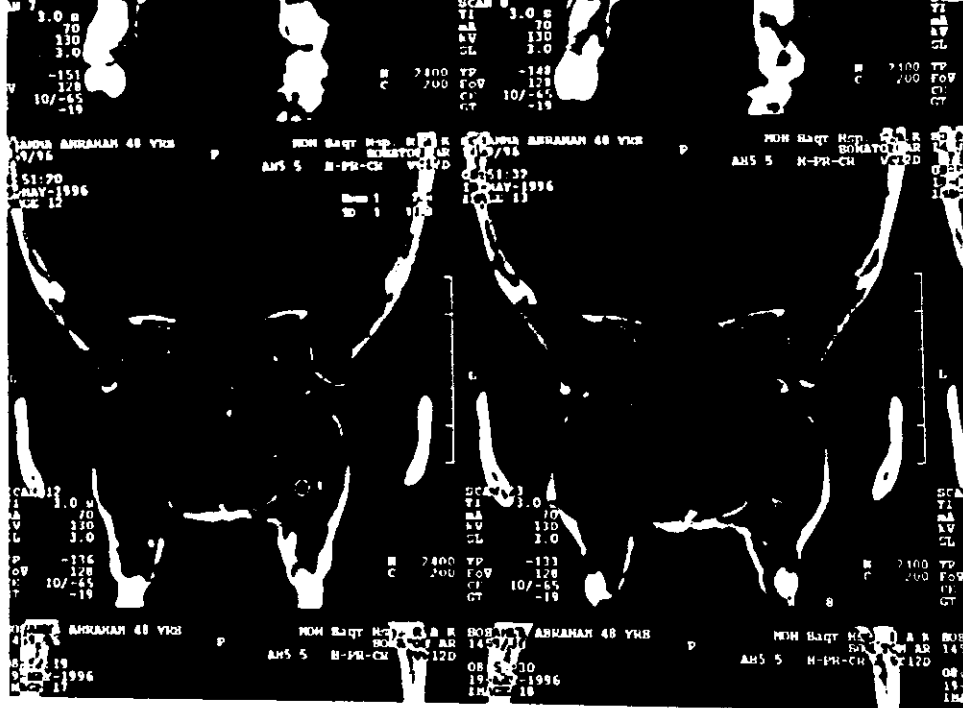
MEASUREMENT OF MAXILLARY SINUS PRESSURE;

Bilateral antral washout under antibiotic cover and with local anaesthesia.

Rt. antrum pressure = - 2 cm water

Lt. antrum pressure = 0 cm water.

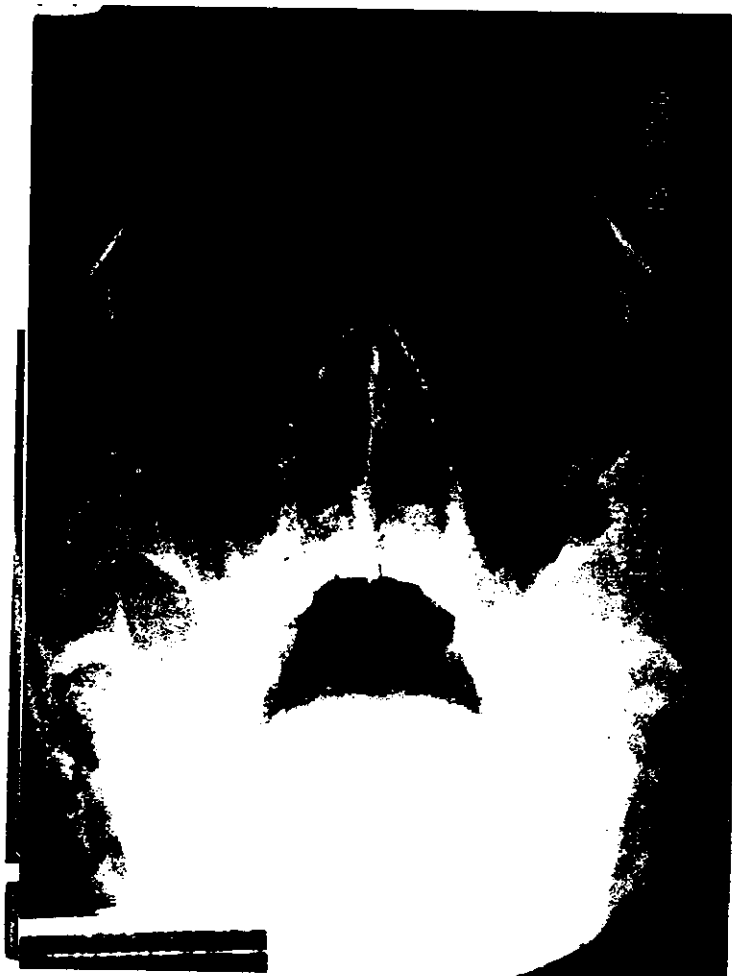
(170)



CASE 42

Plate
12-a.

C.Tscan Film
Coronal section
on maxillary sinus
showing, thickened
mucoperiosteum
and air fluid level
both antra



Plain x-ray ski
o-m view

Plate 12-b.

Hazed both maxillary sinuses and
hypertrophied inferior turbinate
consisting with chronic maxillary sinusitis.

(171)

CASE NO :43

AGE ; 37 Years

SEX : Male

NATIONALITY; EGYPTIAN.

COMPLAINT & HISTORY:

Headache which was exaggerated in the last few days.
Nasal discharge, pain & tenderness over both antra. Pt.
gives history of receiving medical treatment several times for
sinusitis.

DIAGNOSIS; Bilateral acute on top of chronic maxillary
sinusitis.

CLINICAL PICTURE :

Tenderness over both maxillary sinuses , hypertrophied
inferior turbinates , postnasal muco-pus .

RADIOLOGICAL FINDINGS:

Air fluid level in both antra (Lt > Rt)

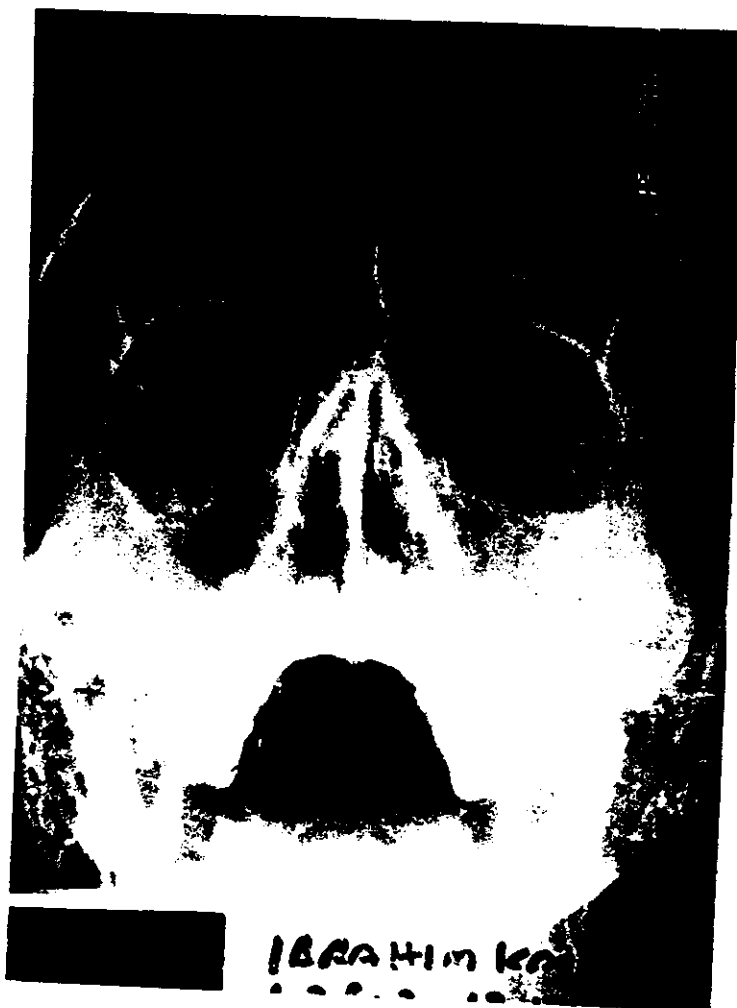
C.T.Scan shows closed ostia.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Bilateral antral washout with local anaesthesia under
antibiotic cover and pressure measurement revealed:

Lt. antrum pressure = + 14 cm water

Rt. antrum pressure = + 12 cm water



(Plate, 13)

Plain x-ray skull , o.m view showing

Air fluid level and thickened mucoperiosteum in Rt. maxillary antrum.

Opaque Lt. maxillary antrum.

(173)

CASE NO : 44

AGE ; 27 Years

SEX : Male

NATIONALITY; U.A.E.

COMPLAINT & HISTORY:

Headache for the last few days, preceded by upper respiratory tract infection, nasal discharge & pain over Rt.antrum. Today slight fever and bodyaches, pt. gives history of chronic maxillary sinusitis.

DIAGNOSIS; Rt. acute on top of chronic maxillary sinusitis.

CLINICAL PICTURE :

Deviated septum to the Lt side ,hypertrophied Rt inferior turbinate , little pus in Rt middle meatus .

RADIOLOGICAL FINDINGS:

Air fluid level Rt. antrum, thickened mucosa Lt. antrum.

C.T.Scan shows closed Rt. ostium.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Rt. antral washout under local anaesthesia and after Rocephine inj. measurement of Rt.antrum pressure = + 16 cm water

CASE NO : 45

AGE ; 38 Years

SEX : Male

NATIONALITY; INDIAN.

COMPLAINT & HISTORY;

Pain & tenderness over Lt. maxillary sinus with generalised bodyaches continuous with previous attack of upper respiratory tract infection.

DIAGNOSIS: Lt. acute on top of chronic maxillary sinusitis.

CLINICAL PICTURE :

Tenderness over Lt maxillary sinus ,hypertrophied Lt inferior turbinate , postnasal discharge .

RADIOLOGICAL FINDINGS;

Air fluid level in Lt. antrum and Rt.antrum showed no abnormality detected.

C.T.Scan shows closed Lt. ostium.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Lt. antral washout with local anaesthesia and antibiotic cover pressure measurement revealed:

Lt. antrum pressure = + 15 cm water.

(175)

CASE NO :46

AGE ; 29 Years

SEX : Male

NATIONALITY; INDIAN.

COMPLAINT & HISTORY;

Pain & tenderness over Rt. maxillary sinus with other nasal symptoms with +ve history of chronic maxillary sinusitis.

DIAGNOSIS; Rt. acute on top of chronic sinusitis.

CLINICAL PICTURE :

Deviated nasal septum to the Rt side , pus anterior and posterior in the Rt middle meatus .

RADIOLOGICAL FINDINGS:

Air fluid level Rt. antrum.

C.T.Scan showed closed Rt. ostium

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Rt. antral washout under local anaesthesia and cover of Rocephine inj. pressure measurement > Rt. antrum pressure= +12.cm water.

CASE NO : 47

AGE ; 29 Years

SEX : Male

NATIONALITY; INDIAN.

COMPLAINT & HISTORY;

Pain and tenderness over Lt. maxillary sinus with nasal symptoms with positive history of chronic maxillary sinusitis.

DIAGNOSIS: Lt. acute on top of chronic sinusitis.

CLINICAL PICTURE :

Hypertrophied inferior turbinates on both sides of the nose , postnasal discharge .

RADIOLOGICAL FINDINGS;

Air fluid level Lt. antrum.

C.T. Scan shows closed Lt. ostium

MEASUREMENT OF MAXILLARY SINUS PRESSURE;

Lt. antral washout under local and cover of antibiotic , pressure measurement revealed:

Lt. antrum pressured = + 16 cm water

CASE NO: 48

AGE : 39 Years SEX : Male, NATIONALITY: INDIAN.

COMPLAINT & HISTORY:

Pain & tenderness over both antra Rt > Lt. Nasal discharge, fever, generalised body aches & positive history of chronic maxillary sinusitis.

DIAGNOSIS: Bilateral acute on top of chronic maxillary sinusitis.

CLINICAL PICTURE :

Hypertrophied inferior turbinates on both sides posterior rhinoscopy revealed enlarged posterior ends causing valvular obstruction with breathing, little discharge postnasally.

RADIOLOGICAL FINDINGS:

Almost complete opaque Rt antrum and Lt antrum shows cyst like shadow.

C.T. Scan shows closed ostia.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Bilateral antral washout under local anaesthesia and cover of antibiotic. pressure measurement revealed :

Rt. antrum pressure = - 2 cm water

Lt. antrum pressure = - 4 cm water.



Plain X-ray
skull,
D-M view
showing

Cystic opacity
in the floor of
Lt. maxillary
sinus

Air fluid level
and haziness in
Rt. antrum.

Md Ali Mohd
41662

(Plate, 14)

(179)

CASE NO : 49

AGE ; 24 Years

SEX : Female

NATIONLAITY; LEBANESE.

COMPLAINT & HISTORY:

Rt. side pain over Rt. antrum and tenderness added to nasal discharge, pain was diagnosed by mistake as migraine for the last year. It was chronic sinusitis.

DIAGNOSIS; Rt. acute on top of chronic maxillary sinusitis.

CLINICAL PICTURE :

Tenderness over Rt antrum , deviated nasal septum to the Rt side , pus in Rt middle meatus .

RADIOLOGICAL FINDINGS:

Opaque Rt. antrum , Lt.antrum shows air fluid level.

C.T.Scan shows closed Rt. ostium.

MEASUREMENT OF MAXILLARY SINUS PRESSURE'

Rt.antral washout under local anaesthesia and pressure measurement revealed:

Rt. antrum pressure = - 3.2 cmwater.

CASE NO : 50

AGE : 34 Years

SEX : Female

NATIONALITY: INDIAN.

COMPLAINT & HISTORY:

Recurrent attacks of bitemporal headache on top of slight heaviness of the head all the time for the last 6 month, pain & tenderness over both antra was obvious.

DIAGNOSIS: Bilateral acute on top of chronic maxillary sinusitis.

CLINICAL PICTURE :

Mucopus anteriorly and posteriorly , congested nasal mucosa .

RADIOLOGICAL FINDINGS;

Opaque both antra.

C.T.Scan shows thickened mucosa only.

Ostia are patent

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Bilateral antral washout under local anaesthesia and antibiotic cover, pressure measurement revealed normal pressure (0 cm water) in both sinuses.

CASE NO : 51

AGE : 14 years .

SEX : Male .

NATIONALITY: Egyptian .

COMPLAINT & HISTORY:

Recurrent bleeding per nose , specially from Rt side .

DIAGNOSIS: Epistaxis in children .

CLINICAL PICTURE :

Bleeder from Little's area on the Rt side with blood traces in both sides.

RADIOLOGICAL FINDINGS;

X-ray sinuses with little fluid in the Rt antrum.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Rt antral wash out after cauterisation revealed normal atmospheric pressure . (0 cm water) .

CASE NO : 52

AGE : 11 years .

SEX : Female .

NATIONALITY: Egyptian .

COMPLAINT & HISTORY:

Recurrent bleeding per nose , usually from one side either Rt or Lt but more from Lt side .

DIAGNOSIS: Epistaxis in children .

CLINICAL PICTURE :

Bleeder from Little's area on the Lt side .

RADIOLOGICAL FINDINGS;

X-ray sinusses showed air fluid level in Lt maxillary antrum.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Lt antral pressure = 0 cm water .

CASE NO : 53

AGE : 55 years .

SEX : Female .

NATIONALITY: U.A.E

COMPLAINT & HISTORY:

Sudden attack of bleeding from Rt side of the nose , the patient is a known case of hypertention on treatment but she did not check her B.P for more than 4 month.

DIAGNOSIS: Epistaxis with hypertention .

CLINICAL PICTURE :

B.P = 170 : 100

Deviated nasal septum to the Rt side , bony spur at the Rt side of nasal septum , bleeder is posterior to the septal deflection .

RADIOLOGICAL FINDINGS;

X-ray sinuses revealed air fluid level in Rt antrum .

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Rt antrum pressure = + 2.5 cm water .

N.B : Pressure measurement performed immediately after bleeding control .

CASE NO : 54

AGE : 40 Years .

SEX : Male .

NATIONALITY : Egyptian .

COMPLAINT & HISTORY:

Recurrent attacks of bleeding from the nose in both sides but mainly from Rt side , the patient had septoplasty operation 2 years ago .

DIAGNOSIS: Epistaxis with septal perforation .

CLINICAL PICTURE :

Bleeder over the posterior edge of anterior moderate size septal perforation .

RADIOLOGICAL FINDINGS;

X- ray sinuses revealed thickened mucosa with air fluid level at Rt antrum (blood).

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Rt antrum P = + 1 cm water .

Lt antrum P = + 0.5 cm water .

CASE NO : 55

AGE : 60 years .

SEX : Female .

NATIONALITY: U.A.E

COMPLAINT & HISTORY:

Sudden attack of epistaxis ,the patient is giving history of hypertention and negligence of treatment for the last 2 month .

DIAGNOSIS: Epistaxis with hypertention .

CLINICAL PICTURE :

B.P = 190 : 110 mmHg

Bleeding from Rt side of the nose , bleeder is posterior and could not be identified .

RADIOLOGICAL FINDINGS;

X-ray sinuses showed air fluid level (blood) in the Rt maxillary sinus.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Bleeding controlled by nasal packing . Pressure measurement in Rt antrum = + 3 cm water (before nasal packing) , after removal of pack pressure was re-measured in the Rt antrum and it was found to be equal -2cm water .

CASE NO : 56

AGE : 38 years .

SEX : Male .

NATIONALITY: Palestinian

COMPLAINT & HISTORY:

Patient complains of headache and nasal discharge for more than 6 month . He was given treatment for sinusitis several times with no improvement .

DIAGNOSIS: Inverted papilloma .

CLINICAL PICTURE :

Atrophic pale nasal mucosa , dirty pale yellowish discharge , with masses in the nose to the Rt side.

RADIOLOGICAL FINDINGS;

X-ray revealed opaque Rt antrum .

C.T scan revealed opaque Rt antrum , irregular thickening of the wall , no bony erosion .

His to pathology report confirmed the diagnosis.

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Rt A.W.O. was performed several times before final diagnosis was done. Measurement of pressure was done every time but usually it gives positive pressure (from + 1.5 to + 4.5 cm water).

CASE NO : 57

AGE : 26 years .

SEX : Male .

NATIONALITY: U.A.E

COMPLAINT & HISTORY:

Comatosed patient because of head injury in car accident .

DIAGNOSIS: Fractured middle third of the face in R.T.A

CLINICAL PICTURE :

Injury to the Lt inferior turbinate and blood in both sides of the nose .

RADIOLOGICAL FINDINGS;

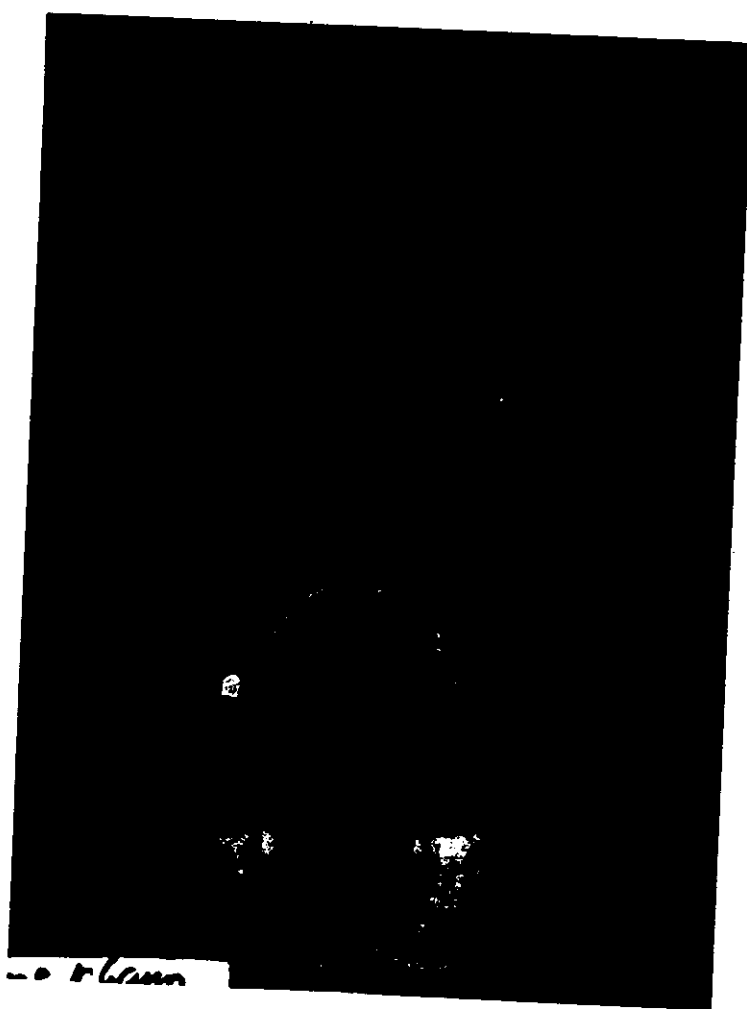
X-ray revealed multiple fractures in the skull ,our interest here is for the fracture of the anterior wall of the Lt antrum and complete radio opacity of the Lt antrum .

MEASUREMENT OF MAXILLARY SINUS PRESSURE:

Lt antral pressure = + 5 cm water .

N.B : Procedure performed in the intensive care unit .

**THE FOLLOWINGS ARE EXAMPLES OF X-RAY
AND C.T SCAN PICTURES SHOWING SOME
ABNORMALITIES IN THE MAXILLARY
SINUSES .**

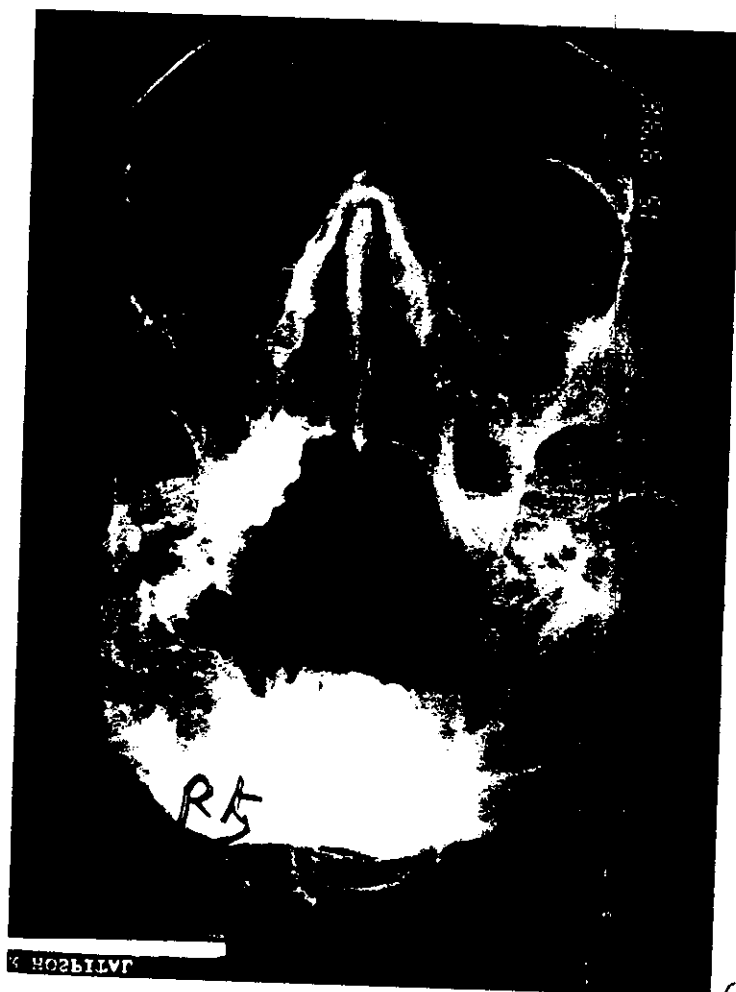
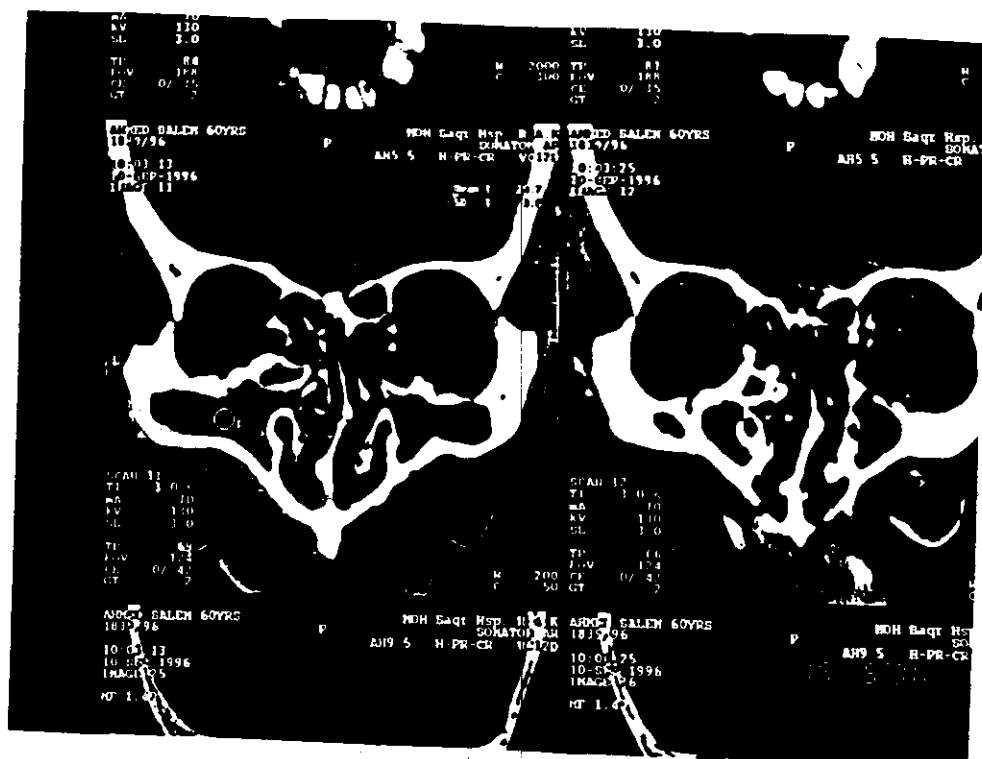


Plain X-ray skull
O-M view

Plate , 16

**Thickened mucoperiosteum in both maxillary sinuses , More haziness
on the left side .**

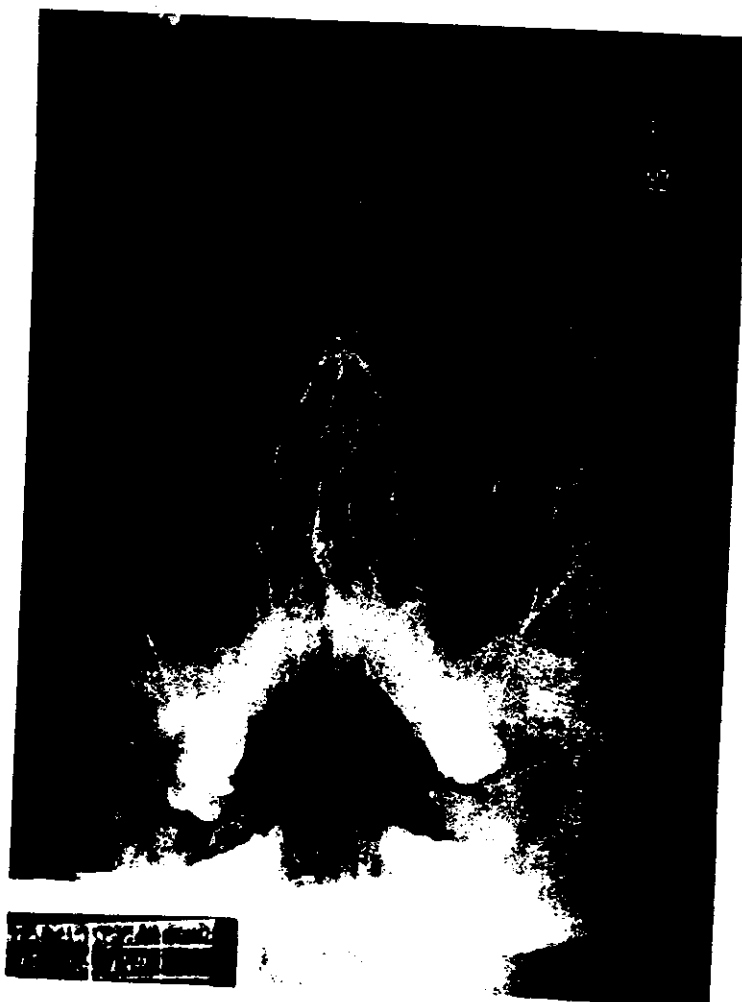
(189)



(Plate, 17.A)
C.T scan, coronal
cut, showing
thickened muco-
periosteum in Rt
antrum and opaque
Lt antrum.

X-ray skull, O-M view.
Rt. maxillary
sinus shows
thickened mucu-
periosteum
Air fluid level
Lt. maxillary
sinus.

(Plate, 17.B)



(Plate, 18)

Plain x-ray skull , o-n view showing

Polypoidal thickening in the superior wall and lateral the Lt maxillary sinus

(191)

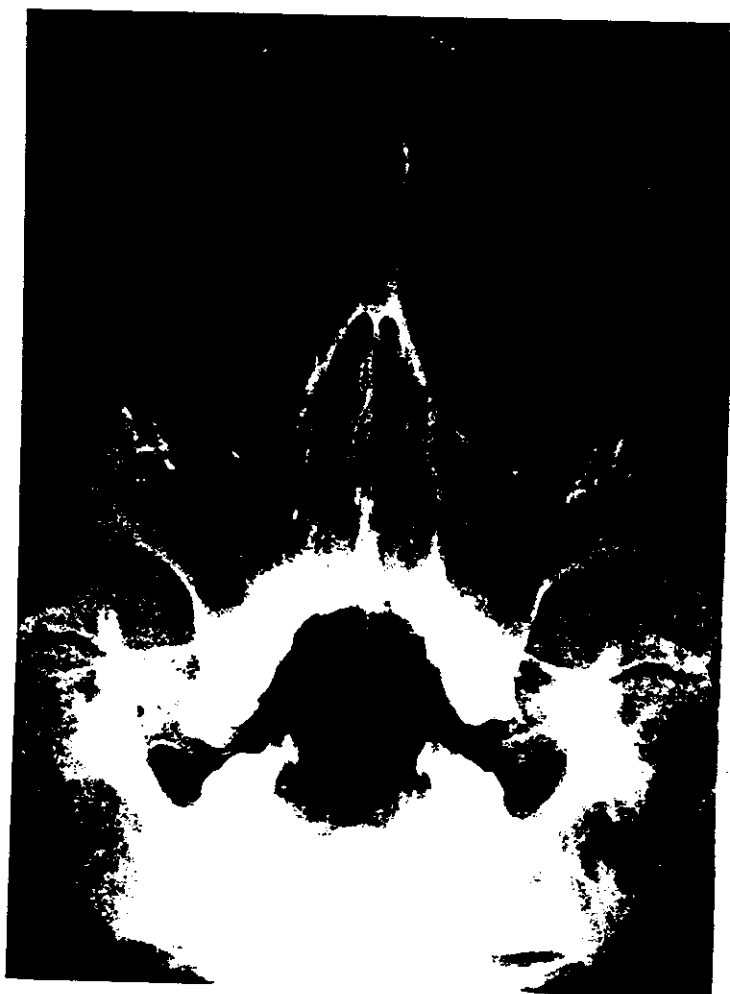


Plain x-ray
skull
waters view

(Plate, 19)

Veiling Lt. maxillary sinus with thickened
mucoperiosteum in both antra

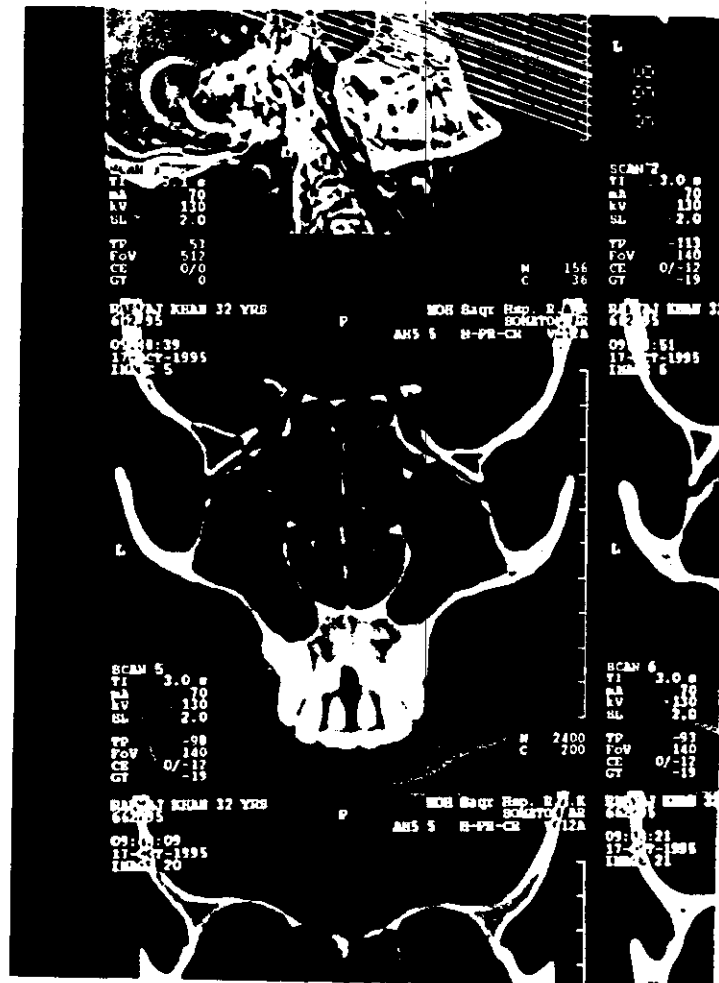
(192)



(Plate, 20)

Plain x-ray skull , O-M view
showing
Normal appearance of paranasal sinuses

(193)



C.T scan skull, Coronal section on P.N.S
showing
Thickened mucoperiosteum
of both maxillary sinuses.

Plate 21-c.