INTERNATIONAL CONFERENCE
on
TUBERCULOSIS & CHEST DISEASES

Lahore - Pakistan, 08 - 11 March, 1998

JEHAD AGAINST TUBERCULOSIS
PUNJAB ANTI T.B. ASSOCIATION
LAHORE

Organised by:
Punjab Anti Tuberculosis Association
Under the auspices of
Pakistan Anti Tuberculosis Association
Institute of Chest Medicine
King Edward Medical College

PROGRAMME & ABSTRACT BOOK

PROGRAMME AND ABSTRACTS

CONTENTS PAGE NO.

Compiled and edited

by

Prof. Shamshad Rasul Awan

Dr. Nadeem Anwar

Dr. Khalid Waheed

Ch. Muhammad Rashid

PUNJAB ANTI TUBERCULOSIS ASSOCIATION

The year 1956 is a memorable year in the history of Tuberculosis in Pakistan. It was this year when (Late) Dr. Riaz Ali Shah, S.K., F.E.A.P. and a few sincere, devoted and enthusiastic ex-TB patients laid the foundation of this voluntary organization in Lahore, which by the grace of God Almighty, flourished with the passage of time in spite of adverse and unfavourable conditions and is now seen as a grown up shady tree with branches spread all over the province. This is the fruit of missionary zeal and dedication of those selfless workers. At present Punjab Anti Tuberculosis Association and its various branches are running a number of TB Hospitals, TB clinics and rehabilitation centres, and are providing facilities for the diagnosis and treatment to the poor TB patients, and are helping in the rehabilitation of cured TB patients.

The aims and objectives of TB Association include adoption of every possible means and methods to eradicate Tuberculosis, undertaking research in the field of tuberculosis, health education of public regarding the tuberculosis problem creating public awareness about this disease, and rehabilitation of cured tuberculosis patients, needing help in this regard and making them equally useful members of the society.

Punjab Anti Tuberculosis Association has prospered under the dynamic leadership of Malik M. Binyamin, and his dedicated team, and has launched a programme of TB Free Zones, and encouraged by the results intends to extend this programme to other areas of the province. This programme comprises of survey of the population of the locality to detect those suffering from tuberculosis and treat them vigorously thus eradicating the source of infection from that area and making the area free from tuberculosis. Health Education is also imparted to the people of the locality thus creating awareness regarding this menace.

Recently the association has launched Health Education Programme in schools with has started reaping fruits.

SERVICES AT A GLANCE

i)	Branches Associations	70	
ii)	TB Hospitals	04	
iii)	TB Clinics	46	
iv)	Model Chest Clinic (Punjab Anti TB Assn)	1	
v)	Drug Centers	22	
vi)	Rehabilitation Centers	11	
vii)	Health Education Centers	51	
viii)	Honorary Workers	17000	
ix)	Qualified Doctors/Full Time	38	
x)	Honorary Doctors Part Time	35	
xi)	Para Medical/Clerical Staff	138	
xii)	Patients treated During 1996-97	4.5	Lacs Approx.
xiii)	Health Education to School Children	120,000	Approx.
xiv)	Health Education to HSS/Colleges	433	
xv)	Health Education Through Electronic and Print Media		

Punjab-Pakistan

INTERNATIONAL CONFERENCE ON TUBERCULOSIS AND CHEST DISEASES

GENERAL INFORMATION

VENUE

All activities of international Conference on Tuberculosis and Chest Diseases will be held in Hotel Avari, Lahore, Inaugural session and plenary sessions will be held in the Khurshid Mahal. The Scientific Sessions will be held in Khurshid Mahal situated at the first floor.

REGISTRATION

All participants including invited speakers must get registered. Registration will be open on the registration counter in the lobby of Hotel Avari, Lahore from 8-10 March 1998 between 8.30 and 16.00 hours.

DRESS

Dress can be informal.

LANGUAGE

The official language of the conference is English.

CONFERENCE SATCHEL

Your conference document satchel will contain copies of book of abstracts and programme, identification badge, invitation cards and other relevant material. All registered delegates are requested to "sign in" and collect their document satchel from the registration counter on March 8, 1998 by 18.00 p.m. after that the counter will close for the day.

IDENTIFICATION BADGES

Please wear your identification badge on all occasions during the conference.

TEAS/COFFEES/MEALS

Teas/coffees will be served in the prefunction areas of the conference venue during the forenoon and afternoon breaks between the scientific sessions in the morning and evening.

Entry to tea/lunch and dimer places will be served to registered members only who will be cards.

CONFERENCE NEWS

Conference news will be put up on the bulletin board at the information centre, in the lobby of conference Hall, daily during the conference. It will contain news of the conference, change in the programme (if any) and other relevant information.

PHOTOGRAPHS

Photographs taken by the conference photographer will be displayed at the information centre. Orders for copies of photographs can be placed with the official photographer.

PUBLICATIONS

Abstracts of scientific papers received by the secretariat have been published in the book of abstracts included in your satchel.

INAUGURAL SESSION

Inaugural ceremony will be held on March 8, 1998 at 4.00 p.m.

SCIENTIFIC TRADE EXHIBITION

An exhibition of electro-medical equipment and pharmaceutical products of interest is arranged Dinshsh Hall on the first floor. Trip to the scientific trade exhibition will be fruitful.

SIGHT SEEING:- on request

CONFERENCE HAS BEE DESIGNATED AS A "NO SMOKING" CONFERENCE PARTICIPANTS ARE REQUESTED TO AVOID SMOKING ON THE CONFERENCE PREMISES OR AT THE CONFERENCE FUNCTIONS.

DISCLAIMER

While every effort will be make to ensure that all the events of the conference mentioned in the brochure will take place as scheduled, the organizing committee assumes no responsibility should it fail to materialise for any reason.

INSTRUCTIONS TO SPEAKERS

Plenary session will beheld in the Khurshid Mahal every morning as per programme. After the morning tea/coffee break scientific sessions will be held simultaneously in the Khurshid Mahal and Function Room.

SLIDE PRE-VIEW FACILITIES

The slide pre-view facilities will be available in a room adjacent to Khurshed Mahal. Speakers for the morning sessions must deliver their slides in the evening before and for the afternoon sessions before lunch break, to the projectionist after loading the magazine in appropriate order. Overhead projector for transparencies will also be available.

Slides may be collected from the slide preview room after the session. All speakers are requested to familiarise themselves with audio-visual aids and methods of communication with the projectionist.

Speakers are reminded that in order to keep to the programme and ensure smooth running of the sessions, they should restrict themselves to the allotted time as per programme.

The speaker will be warned by a bell 2 minutes before his allotted time is up. He should summarize his paper and stop immediately as the final bell is sounded.

To ensure smooth running of the sessions the speakers are requested to avoid requests for change of session/schedule.

DISCUSSIONS

5 minutes will be given for discussion at the end of each presentation. Members wishing to take part in the discussion are requested to write their questions along with their names and countries of origin on the pad provided and pass it on to the chairman through aids in the hall.

PARTICIPANTS

Participants in the scientific sessions are requested to be seated in the hall at least 5 minutes before the commencement of the session.

NOTE

Authors are reminded that the papers included as reserve papers will only get chance if participants from the regular schedule are unable to make their presentations.

SCIENTIFIC PROGRAMME

International Conference On
Tuberculosis and Chest Diseases

at

Hotel Avari, Lahore - Pakistan

on

8 - 11 March, 1998.

Organised by:

Punjab Anti TB Association, Lahore

Under the auspices of:

Pakistan Anti Tuberculosis Association

Institute of Chest Medicine
King Edward Medical College, Lahore.

ORGANISING COMMITTEE

Chairman:	Malik Muhammad Binyamin
Vice Chairman:	Dr. R.M. Yasin
Secretary General:	Ch. Muhammad Nawaz
Scientific Programme:	Prof. Dr. Shamshad Rasul Awan
Social Programme:	Rao Ikram Ali Khan
Hotel/Accomodation:	Dr. Ahmed Saghir Ansari
Transport:	Ch. Munawar Ahmed
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Prof. Dr. Shamshad Rasul Awan

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Dr. Nadeem Rizvi
Dr. Arshad Javaid
Dr. Muhammad Iqbal Safi
Dr. Syed Karam Shah
Dr. S. M. Naeem
Dr. R. M. Yasin

PROGRAMME

8TH March 1998

8th March 1998.		Registration at Avari Hotel Lahore from 900 hrs to 1700 hrs.

Inauguration Session

8th March 1998	04-00 P.M	Guests to be seated.
	04-30 P.M	Arrival of the Chief Guest. Inauguration of Conference & Exhibition.

Reception

1st Day
9th March, 1998 SCIENTIFIC SESSION - I

Khurshid Mahal

Chairs : Prof. Muhammad Ehsan Khan
: Syed Khurshid uz Zaman
Secretary : Mukhtiar Zaman Afridi

9:00a.m to 9:30a.m:	TB Control in Pakistan *Ghazala Ansari*
9:30a.m to 10:00a.m:	Update Management of Tuberculosis *Shamshad Rasul Awan*
10:00a.m to 10:15a.m:	The 'OLD NTP' and the Revised National Tuberculosis Control Programme *Debabar Banerji*
10:15a.m to 10:30a.m :	TB Control Programme in a Teaching Hospital *Arshad Javaid*
10:30a.m to 10:45a.m :	Compliance of Anti Tuberculous Therapy In Idian Patients. Study From A Tertiary Care Hospital *D. Behera*
10:45a.m to 11:00a.m:	Impact of Integration of Tuberculosis Control Program in Health Care Network of Varamin District. *S. Salek*
11:00a.m to 11:30a.m:	**Tea/Coffee break**

International Conference On Tuberculosis and Chest Diseases

1st Day

9th March, 1998 SCIENTIFIC SESSION - II-A

Khurshid Mahal

Chairs : Porf. Abdul Aziz
: Majeed Memon
Secretary : Abdul Samad Wazir

11:30a.m to 11:45a.m:	Management of Resistant Pulmonary Tuberculosis *Arshad Javaid*
11:45a.m to 12:00p.m:	MDR-TB-Role of Young Medical Graduates *Balbear Malhotara, Gianchand Ahir*
12:00p.m to 12:15p.m:	Study of Drug Resistance to Anti-TB Drugs (Intial & Acquired) in PGMI. LRH Peshawar. *Musarrat Shah, Abdul Samad, Arshad Javaid*
12:15p.m to 12:30p.m:	Multiple Drug Resistance Tuberculosis Interventions & Strategies At Amargadh *A. L. Anand*
12:30p.m to 12:45p.m:	Prevelence of Typical and Atypical Mycobacteria in a Mixed Urban and Rural Population of Lahore *Aftab H. Bhatti*
12:45p.m to 1:00p.m :	TB Surveillance Trends And Facts *S. Salahuddin*
1:00p.m to 1:15p.m :	Survey of Knowledge, Attitudes and Practices for Tuberculosis amongst Family Physicians *Nadeem Rizvi, Muhammad Hussain*
1:15p.m to 1:30p.m:	Methods of Recording, Reporting and Evaluation in TB Control Programme *Anis A. Hashmi*
1:30p.m to 2:30p.m:	**Lùnch & Prayers**

International Conference On Tuberculosis and Chest Diseases

1st Day

9th March, 1998 SCIENTIFIC SESSION - II-B

Function Room

Chairs : Porf. Zafar Ullah Khan
: Syed Nazim Hussain Bukhari
Secretary : Abdul Majeed Akhtar

11:30a.m to 11:45a.m:	Tuberculous Meningitis, A review of 159 Cases Admitted in Gulab Devi Chest Hospital Lahore *Shabbir Raza*
11:45a.m to 12:00p.m:	Tuberculous Meningitis in Children *Shiekh G. A.*
12:00p.m to 12:15p.m:	Extra Pulmonary Tuberculosis *Prof. A. H. Nagi*
12:15p.m to 12:30p.m:	Effect of Yoga on Pulmonary Function *Rana S.N, Bhargava P, Bhargava .V.K..*
12:30p.m to 12:45p.m:	Abdominal Tuberculosis: A Clinico-Morphological Study. *Rahat Sarfraz*
12:45p.m to 1:00p.m :	
1:00p.m to 1:15p.m :	
1:15p.m to 1:30p.m:	
1:30p.m to 2:30p.m:	**Lunch & Prayers**

International Conference On Tuberculosis and Chest Diseases

1st Day

9th March, 1998 SCIENTIFIC SESSION - III

Khurshid Mahal

Chairs : A. Hayee Saeed
: Arshad Javaid
Secretary : Khalid Waheed

2:30p.m to 2:45p.m: Study on Typing in 247 Patients with Lung Cancer
To Thi Kieu Dung

2:45p.m to 3:00p.m: Combined Bronchoscopy Routine Technology in Clinical Practice
A. Hayee Saeed

3:00p.m to 3:15p.m: Per-Cutaneous Needlee Aspiration Biopsy (PCNAB) in Pulmonary Neoplasm. A Review of 54 Cases
Syed Khurshid-Uz-Zaman

3:15p.m to 3:30p.m: Presentation of Lung Cancer
Zafar Hussain Iqbal

3:30p.m to 3:45p.m: Analysis of Bronchoscopy Record at Peshawar.
Arshad Javaid

3:45p.m to 4:00p.m : Fiberoptic Bronchoscopy - Role in the Diagnosis of Bronchogenic Carcinoma
Muhammad Kahlid Ch

4:00p.m to 4:15p.m : BAL for the Diagnosis of Unusual Pulmonary Infections in Renal Transplant Recipients.
Kamal Sud

4:15p.m to 4:30p.m : Diagnostic Role of Fibreoptic Bronchoscopy in Sputum Smear Negative Pulmonary Tuberculosis
Abdul Samad

8:00p.m **Dinner & Cultural Programme**

International Conference On Tuberculosis and Chest Diseases

2nd Day

10th March, 1998 SCIENTIFIC SESSION - IV

Khurshid Mahal

Chairs : Roland A. Clark
: Prof. Mumtaz Hassan
Secretary : Saulat Ullah Khan

9:00a.m to 9:30a.m: Challenges of COPD
Roland.. A. Clark

9:30a.m to 10:15a.m: Management of Bronchial Asthma
Prof. Abdul Aziz

10:15a.m to 10:30a.m: Allergic Bronchopulmonary Aspergillosis and Bronchial Asthma
Zafar Hussain Iqbal

10:30a.m to 10:45a.m: Limitations to the Optimum Aerosol Delivery
Syed Nazim Hussain Bukhari

10:45am to 11:00a.m: Does Teaching by Doctors Improve Inhaler Technique in Asthma and COPD Patients.
Anwar S. K, Akhtar S., Khaliq A. R

11:00am to 11:30a.m: Tea/Coffee break

International Conference On Tuberculosis and Chest Diseases

2nd Day

10th March, 1998 SCIENTIFIC SESSION - V-A

Khurshid Mahal

Chairs : Prof. Abdul Hafeez Khan
: Syed Karam Shah
Secretary : Kamran Cheema

11:30a.m to 12:00p.m: Management of Tuberculosis with Chemotherapy.
Prof. Muhammad Ihsan Khan

12:00p.m to 12:15p.m: Family Doctors and Tuberculosis Control
Prof. Shamshad Rasul

12:15p.m to 12:30p.m: Planning Dots in Rural Area
Syed Karam Shah

12:30p.m to 12:45p.m: DOTS V/S SATS A Comparative Treatment Out Come Report on Re-Treatment Pulmonary TB Patients.
Aman Ullah Ansari

12:45p.m to 1:00p.m: Intermittent Three Times a Week D.O.T.S. (Directly Observed Treatment Short Course) A Preliminary Report.
Dr. Shahina Qayyum

1:00p.m to 1:15p.m: Frequency and Type of Reactions to Anti Tuberculosis Drugs
S. Khalil Zadeh

1:15p.m to 1:30p.m: Incidence of Hepatitis in Patients Taking Anti Tuberculous Treatment.
Masood Ul Haq

1:30p.m to 2:30p.m: Lunch & Prayers

International Conference On Tuberculosis and Chest Diseases

2nd Day

10th March, 1998 SCIENTIFIC SESSION - V-B

Function Room

Chairs : Ijaz Ul Hasssn
: Ghazala Ansari
Secretary : M. Iqbal Burki

11:30a.m to 11:45a.m: Pneumothorax: Etiology, Complications and Outcome. A Prospective Study.
Arshad Javaid

11:45a.m to 12:00p.m: Pneumothorax - Valve Drainage of Pleural Cavity-Modified Version of Heimlich (Flutter) Valve.
Nadeem Rizvi

12:00p.m to 12:15p.m: Role of Pleural Biopsies in Diagnosis of Pleural Effusion
Faiza Ullah Shafqat

12:15p.m to 12:30p.m: Diagnostic Evaluation of Exudative Pleural Effusion and the Role of Pleural Biopsy.
Arshad Javaid

12:30p.m to 12:45p.m: A Retrospective Analysis of Pleural Effusions Managed at Institute of Chest Diseases Kotri During 20 Months.
Abrar Ali Khan

12:45p.m to 1:00p.m: Hydatid Cyst in Lung: A Review of 64 Cases
Sardar Ali Bhatti

1:00p.m to 1:15p.m: Empyema Thoracis Conservative Management By Closed Tube thoracostomy
Sultan Ahmad Abdullah

1:15p.m to 1:30p.m: Tuberculosis: An Autopsy Study of 100 Cases
Tariq Mahmood Tahir

1:30p.m to 2:30p.m : Lunch & Prayers

International Conference On Tuberculosis and Chest Diseases

2nd Day

10th March, 1998 SCIENTIFIC SESSION - VI-A

Khurshid Mahal

Chairs : Sultan Ahmad Abdullah
: Akbar Velayati
Secretary : Masood ul Haq

2:30p.m to 2:45p.m: A Comparative Study to Prove the Veracity of Standard Conventional Culture Method VS PCR Method to Diagnose Tuberculosis by Detecting MTB in Local Population.
Aftab H. Bhatti

2:45p.m to 3:00p.m: Out Come of Immunotherapy with Mycobacterium Vaccae in the Treatment of Tuberculosis (Newly Diagnosed Pulmonary Disease).
Arshad Javaid

3:00p.m to 3:15p.m: Diagnostic Value of Specific Antimycobacterial IgG
Mohinder Sing

3:15p.m to 3:30p.m: An Audit Report: Anti tuberculosis Activities at Peripheral OGDC Public Dispensary in Collaboration with Institute of Chest Diseases Kotri.
Javed Ahmad Shiekh

3:30p.m to 3:45p.m: Pulmonary Tuberculosis in Drug Addicts Verses Non Drug Addicts
Saulat Ullah Khan

3:45p.m to 4:00p.m: Isoniazed Induced Foot Drop (A Case Report)
Muhammad Furqan

4:00p.m to 4:15p.m: Flotation Method for Bacteriological Diagnosis in Pulmonary Tuberculosis
P. S. Shanker

4:15p.m to 4:30p.m: Prescribing TB Drugs - A Quality Control Study
Saima Salahuddin

5:30p.m to 7:30p.m: **Business Meeting of Society of Chest Physicians Pakistan**
8:00p.m **Dinner & Cultural Programme**

International Conference On Tuberculosis and Chest Diseases

2nd Day

10th March, 1998 SCIENTIFIC SESSION - VI-B

Function Room

Chairs : Prof. Zafar Ali Syed
: A. L. Anand
Secretary : Zubair Shaheen

2:30p.m to 2:45p.m: Audit of Hospital Management of Severe Acute Asthma
Fazli Maula

2:45p.m to 3:00p.m: Clinical Impact of Substituing Arm Span For Standing Height in Interpreting Spirometry
Dheeraj Gupta

3:00p.m to 3:15p.m: Prevalence and Clinical Correlation of Mycobacteria other than Tuberculosis (MOTT)
H. Jabari

3:15p.m to 3:30p.m : Who Is At Risk of Tuberculosis
Sultana Habibullah

3:30p.m to 3:45p.m: Mass Lesions In Tuberculosis
S. Nazim Hussain Bukhari

3:45p.m to 4:00p.m: Cross Sectional Analysis of Pulmonary Function Abnormalities among Patients with Systemic Lupus Erythmatosus
Ajay Wanchu

4:00p.m to 4:15p.m: Biomass Fuel Pollution, Respiratory Symptoms and Lung Functions - A Comparison of Indoor and Outdoor Kitchens in Rural Area
H.S. Malhotra

4:15p.m to 4:30p.m: Tuberculosis in Renal Transplant Patients
Akhtar S., Ahmed E.

5:30p.m to 7:30p.m: **Business Meeting of Society of Chest Physicians Pakistan**
8:00p.m **Dinner & Cultural Programme**

International Conference On Tuberculosis and Chest Diseases

3rd Day

11th March, 1998 SCIENTIFIC SESSION - VII

Khurshid Mahal

Chairs : Prof. Shahbaz Munir Raja
: Nadeem Rizvi
Secretary : Zafar Hussain Iqbal

9:00a.m to 9:30a.m: Guidelines in Management of Bronchial Asthma
Roland. A. Clark

9:30a.m to 9:45a.m: BCG Vaccination. Does It protect against Tuberculosis (Children age upto 12 Years)
Nadeem Rizvi

9:45a.m to 10:00a.m: Questionnaire on Tuberculosis
Sultan Ahmed Abdullah

International Conference On Tuberculosis and Chest Diseases

3rd Day

11th March, 1998 Concluding and Recommendation Session

Khurshid Mahal

Chief Guest : Mr. Muhammad Iqbal Khan Khakwani
Minister of Health Govt. of Punjab

Guests of Honour : Malik Muhammad Binyamin

: Prof. Shamshad Rasul Awan

Secretary : Ch. Muhammad Nawaz

10:30a.m to 10:40a.m: Brief Activities of Punjab Anti TB Association
by Ch. Muhammad Nawaz General Secretary
Punjab Anti TB Association Lahore

10:40a.m to 10:50a.m: Address and Recommendations
by Prof. Shamshad Rasul Awan
Chairman Scientific Committee Programme

10:50a.m to 11:00a.m: Address by Chief Guest

11:00a.m to 11:05a.m Vote of Thanks & Allah Hafiz
by Malik Muhammad Binyamin
President Punjab Anti TB Association

Tea/Coffee

International Conference On Tuberculosis and Chest Diseases

1st Day

9th March, 1998 SOCIAL WELFARE SESSION

Function Room

Chairs	:	Mrs. Tahmeena Daultana
	:	Miss Shaheen Atiqur Rehman
	:	Malik Muhammad Binyamin
	:	Prof. Afzal Chaudhry
Secretary	:	Ch. Muhammad Nawaz

9:00a.m to 9:15a.m:	Role of Social Worker in Control of Tuberculosis by Prof. Afzal Chaudhry
9:15a.m to 9:30a.m:	Need of Health Education in Pakistan by Miss Ashfa Moghal
9:30a.m to 9:45a.m:	Doctor and His Patients by Dr. R. M. Yasin
9:45a.m to 10:00a.m:	TB Free Zone Tanneries Area Kasur by Ch. Muhammad Nawaz
10:00a.m to 10:15a.m:	Address by Malik Muhammad Binyamin
10:15a.m to 10:30a.m:	Address by the Chief Guest

Tea/Coffee break

COMBINED BRONCHOSCOPY ROUTINE TECHNOLOGY IN CLINICAL PRACTICE.

DR. A. HAYE SAEED
Asthma, Allergy and Bronchoscopy
Unit-Mideast Medical Centre- Karachi-Pakistan.

Bronchoscopy has made great advancement since the days of Gustav Killian. Apart from exploration of bronchial tree for diagnostic purposes through pathologic, micro-biologic and histologic studies, new dimensions have been opened for therapeutic purposes.

These advancements have been made on account of Hopkins telescopic and Ikedas Fiberscopic systems, through rigid bronchoscope with saunders ventilation system, fiberscopic telescopes and flexible fiber scopes respectively. A combination of both systems alongwith specialised optics has not only simplified the procedures but also opened new horizons in the field of:

1. Diagnostic capabilities.
   a. Trans-bronchial biopsies at proper depth.
   b. Bronchial Aspirates, Sputum and secretions.
   c. Broncho-Alveolar lavage for examination.
   d. Fiberscopic examination of pleura through thoracoscopy.
2. Endo-bronchial medication for tuberculosis and studies of bronchial asthma.
3. Removal of foreign bodies big and small.
4. Resolving atelectasis.
5. Emergency relief of airway obstruction in ICU.

What this system we can extend the examining time, under adverse conditions like Hacmoptysis, extend visibility range, with much better results.

MULTIPLE DRUG RESISTANCE TUBERCULOSIS: INTERVENTIONS & STRATEGIES AT AMARGADH

BY DR. A.L. Anand, Additional Director, Tuberculosis Research Centre,
AMARGADH-364210 (Gujrat) India.

OBJECTIVE : To review the causes, Clinical features and response Therapy of Multiple Drug Resistance T.B. (MDRTB).

METHODS : All cases of MDRTB Diagnosed at our centre from 1985-1994, were retrospectively reviewed. MDRTB was defined as a case of TB presenting "IN VITRO", resistance to H and R Plus at least 3rd anti T.B. drug.

DESIGN & SETTING : The study was carried out at our 750 bedded hospital for lung diseases and Thoracic Surgery, affiliated to Medical College. 100 patients were studied different management options were : reserve drugs, Reserve drugs plus surgery. Surgical therapy was used in Thirty cases with predominantly localized disease there were 12 pneumonectomies 8 lobectomies and 10 Thoraco-plasties.

CONCLUSION : MDRTB continues to occur as a result of poor compliance of inadequate treatment has a very high morbidity and mortality even when aggressive surgical and medical strategies are combined. Our data emphasis the need for stronger Primary treatment Programme to avoid emergence of MDRTB.

DIAGNOSTIC ROLE OF FIBREOPTIC BRONCHOSCOPY IN SPUTUM SMEAR NEGATIVE PULMONARY TUBERCULOSIS

Abdul Samad, Muhammd Yousaf, Muhammad Sadiq and Arshad Javaid

This prospective study was conducted at Pulmonology department PGMI/ LRH, Peshawar in patients suspected of having active pulmonary tuberculosis on clinical and radiological grounds.

The inclusion criteria was patients with productive cough and three negative sputum smears for Acid Fast Bacilli. These patients also had chest X-rays which showed minimal infiltrations either unilaterally or bilaterally. In addition they also had blood complete, E.S.R and Sclavo P.P.D testing.

A total of 56 patients aged between 11-70 years (mean= were included in the study. All these patients underwent bronchoscopy with a view to collect bronchial washings for acid fast bacilli. Four of these patients did not turn up with the results of bronchial washings, while two patients were given anti-biotics, to which they responded.

Out of the remaining fifty patients 34 patients (65.3%)(had A.F.B's detected in their bronchial aspirate, while 16 patients (32%) were A.F.B's negative.

All of these fifty patients were offered anti-tubercular chemotherapy. Out of 16 smear negative patients, 11(73.3%) were followed up to see their response to treatment and then to reach a conclusion about the final diagnosis retrospectively. Interestingly all these patients had improved and were symptom free at the end of anti-tubercular therapy.

The sensitivity and specificity of bronchoscopic washings being positive for A.F.B's was 68% and 100% respectively.

A RETROSPECTIVE ANALYSIS OF PLEURAL EFFUSIONS MANAGED AT INSTITUTE OF CHEST DISEASES KOTRI DURING 20 MONTHS

Dr. Abrar Ali Khan, Dr. Nasim Ahmed Qazi,
Dr. Javed Ahmed Shaikh.

We reviewed the records of 107 cases of pleural effusion managed at Institute of Chest Diseases, Kotri during January 1996 and August 1997. The mean age of all patients was 35.5 SD ± 15.7 years. Among 65 lymphocytic exudative effusions, 55 (51.4%) were diagnosed as Tuberculous, 7 (6.5%) malignant and 3 (2.8%) were cases of rheumatoid arthritis. Though tuberculosus pleural effusions are paucibacillary in literature, in 6.3% cases of our series, A.F.B were seen in effusion fluids under direct microscopy. Fourteen had concomitant smear + ve pulmonary tuberculosis. In 41 A.F.B. negative effusions, 20 were found with pulmonary infiltrates while 21 were without any radiological evidence of pulmonary tuberculosis. All 55 cases of T.B. pleural effusions undergoing repeated thoracocentesis with antituberculosis chemotherapy, 38 cases were treated with steroids while 17 cases without adjuvant steroids. The effect of steroids was insignificant in ster*od-treated effusions with an average duration of* 30 ± 9.5 days in terms of residual fibrosis. Out of 8.5% parapneumonic effusions (non-tuberculos) of the series 36% of cases were becouse of cases were because of inadequately treated strep. pneumoniae pneumonias. All malignant effusions were metastatic. Adenocarcinoma (42.8%) was predominant among them. Analyusing 13 pleural effusions containing proteins less than 3 gm/dl on Light's criteria and serum-effusion albumin gradient, seven effusions were found exudate while 6 transudates were confirmed.

CROSS SECTIONAL ANALYSIS OF PULMONARY FUNCTION ABNORMALITIES AMONG PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

Ajay Wanchu, D Gupta, SD Deodhar, SK Jindal
Departments of Internal Medicine and Pulmonary Medicine, Postgraduate Institute of Medical Education and Research, Chandigarh, INDIA

Objective: We performed this cross sectional analysis of our patient population with SLE to look for asymptomatic pulmonary abnormalities among these individuals.

Patients and Methods: Twenty seven patients with SLE were studied. Disease activity was assessed according to the SLE disease activity index (SLEDIA). Analysis for rheumatoid factor (RF) and antinuclear antibodies (ANA). Spirometry and single breath carbon monoxide diffusion (D_LCO) were performed. A value of < 80% predicted in any parameter was taken as abnormal. Values between 60% - 79% were graded as mild reduction and 40 - 59% was moderate reduction.

Results: The mean age of patients (all females) was 32.1 ± 10.3 yrs. Their mean disease duration was 37.7 ± 38.4 months and SLEDIA was 4.9±1.8. Therapy included anti inflammatory drugs (24), corticsteroids (18), chloroquine (14) and boluses of cyclophosphamide (4). ANA was positive in all cases and RF in 12. At least one parameter was abnormal in 13 (48%) patients. Five of them had defect in at least two or more parameters. The commonest defect was reduction in D_LCO in 9 patients (mild reduction in seven cases and all except one had mild reduction. Forced expiratory flow between 25% - 75% of forced vital capacity (FVC) was mildly reduced in three and moderately in one case. Two patients showed mildly reduced FVC. Forced expiratory volume in first second (FEV_1) and FEV_1/FVC was normal in all cases. There was no correlation between SLEDIA, disease duration and serological abnormalities and spirometric defects.

Conclusion: A significant percentage of individuals with SLE have asymptomatic abnormalities that can be detected on spirometry. These defect, however, are mild in most cases.

DOTS (DIRECTLY OBSERVED TREATMENT SHORT COURSE) V/C: SATS (SELFADMINISTERED TREATMENT SHORT COURSE) A COMPARATIVE TREATMENT OUT COME REPORT ON RE-TREATMENT PULMONARY T.B. PATIENTS.

AMNA, GHAZALA A., AHSAN Q., IJAZ Z.

Ojha Institute of Chest Diseases, Karachi, a 350 bedded hospital with five out-door chest clinics located in each district of Karachi, registers about 4000-4500 T.B. patients every year. The institute introduced WHO recommended revised T.B. Control strategy including DOTS in all its five chest clinics in year 1995.

The compliance of Refreshment pulmonary T.B. patients towards treatment is usually very poor when treated on ambulatory basis, hence a study was conducted in two out-door chest clinics of the institute to compare the compliance of Refreshment group of patients enrolled on DOTS (429 patients) with those who were treated as SATS patients (293 patients).

The treatment out come results of both groups will be presented.

Although the overall compliance in both groups does not meet the WHO target (at least 75%) but the compliance of Re-Treatment pulmonary T.B. patients enrolled on DOTS was 25 times more than those enrolled on SATS. Relapse rate registered till December, 1997 is only 1% in DOTS patients and 11% in SATS Patients.

The detailed comparative report will presented.

METHODS OF RECORDING, REPORTING AND EVALUATION IN T.B. CONTROL PROGRAMME

BY

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Accurate recording of T.B cases is necessary for correct reporting of data in a T.B Control Programme. The evaluation of the programme is based upon correct recording and reporting. The initial registration of a patient is made in a case finding list available in every chest clinic. The case finding list is prepared in duplicate every day as a new list containing all the necessary informations about the patient to be investigated, for example; serial number, name, age, sex, marital status, occupation, N.I.C. number, Address purpose of visit, results of investigations; sputum by D/S or culture, results of X-Ray chest (in codes) and tuberculing test (children) and remarks showing the status of patients at the time of registration like new/old, referred, resumed, relapse etc. The list is prepared by receptionist and a copy is ent to laboratory for recording the results of sputum and a copy to the medical officer for reporting X-Ray results in codes.

According to results of sputum and X-Rays, files of patients are prepared for index index cases (positive sputum), suspect cases (negative sputum), extra pulmonary T.B (plural effusion and Hilar Adenitis) and extra respiratory cases (disease outside respiratory system). Informations are transferred on T.B register for permanent record and on patient's treatment card.

Treatment regimen prescribed and the results of treatment are recorded as cured, completed treatment, patient lost as defaulter, died, transferred out, treatment failure etc., in a monthly report from.

Evaluation of the programme is made by tabulating the quarterly and annual reports from the monthly reports.

Evaluation is made on the basis of case finding and treatment. Comparing the observed rate of incidence (from annual report) with expected rate of incidence by tuberculin testing method in non B.C.G. vaccinated school children is the basis of evaluation of case finding.

Evaluation of the result of treatment is based upon the percentage of cure rate obtained from annual report, which should be at least 85% (W.H.O.)

MANAGEMENT OF RESISTANT PULMONARY TUBERCULOSIS

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Multiple drug resistant tuberculosis is a common problem that chest physicians come across in a country. Ironically the second line drugs which is the treatment of these patients are not freely available. In this paper we present the out come of 32 patients with multi drug resistant tuberculosis with a novel treatment.

ANALYSIS OF BRONCHOSCOPY RECORD AT PESHAWAR

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Fibreoptic brochoscopy is a useful investigation for the diagnosis of pulmonary opacities of unknown cause. This procedure was introduced in NWFP in 1990 and since then 1189 bronchoscopies h ave been performed. Out of these, 77% were male and 23% female. The commonest indication for bronchoscopy was radiological opacity in >70% of cases followed by haemoptysis and collapsed lung or lobe.

Out of the total 1189 cases, 388 (33%) had endobrochial tumors. Out of these, 65% were smokers. 122 patients were in the age range 60-69, 105 were 50-59, 70 were 40-49 while 50 patients were in the range of 70-79 years. The commnest presenting symptom was cough in 41% followed by chest pain in 21% and haemoptysis in 20% of the cells patients.

Cytology of bronchial lavage was positive for malignant cells sin 35% of the cases. Squamous cell carcinoma was the commonest histological type of tumour, found in 34% of cases. Small cell was present in 25%, large cell in 14% and adenocarcinoma in 3% of the cases.

T.B. Control Programme in a Teaching Hospital.

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Pulmonary tuberculosis represents a main problem in N.W.F.P. In 1994 the A.R.I. (annual risk of infection) was 1.69% and the expected incidence of smear positive cases was 93/100000 population. To see the impact on controlling a preventable communicable disease, we should be keeping a good record of case finding and holding. To see how for we are able to achieve that, is the basic theme of this retrospective data analysis of TBCP which was started on 26th Oct. 1992 with the co-operation of ICD.

Total number of cases registered were 2542 out of these 1899 patients were having pulmonary tuberculosis and 643 patients were extra pulmonary tuberculosis.

1087 were smear positive cases and 812 cases were smear negative. Ratio of new AFB positive / new pulmonary cases was 57%.

The total output (complete + lost patients) was 2125 and 417 patients are under treatment at the end of 31st June 1996. 1159 patients completed the treatment while 966 patients were lost. The percentage of patients who completed the treatment was as follow.

Smear positive patients 56% Smear negative patients 54% EPTB patients 53% 55% patients completed the treatment while 45% patients were lost. The percentage of "lost" was highest in 1993 when TBCP was started and there was no proper supervision while the % of lost patient gradually dropped with proper supervision and dropped to 29% in 1996.

The yearly improvement can be noted as:

	1993	1994	1995	1996
Smear Positive lost patients	67%	53%	34%	29%
Smear negative lost patients	71%	57%	27%	37%

The cure rate of sputum smear positive patients was 71% in 1996.

Significant improvement is noted over the year from 1993 to 1996. Although the goal of 85% cure rate set by the WHO is not yet achieved, but with proper supervision and a TBCP on a permanent basis will hopefully increased the cure rate.

OUT COME OF IMMUNOTHERAPY WITH MYCOBACTERIUM VACCAE IN THE TREATMENT OF TUBERCULOSIS (NEWLY DIAGNOSED PULMONARY DISEASE).

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A killed suspension of the harmless environmental mycobacterial species M. Vaccae has been extensively investigated as a potential immunotherapeutic agent for use in addition to chemotherapy in the treatment of pulmonary tuberculosis. So far it has not been used in Pakistan.

In this study, 48 patients newly diagnosed as sputum smear positive pulmonary T.B were randomised to receive immunotherapy or placebo (an injection of saline) on day 3 or 4 of the routine course of chemotherapy. Patients were between 18 to 50 years old and included both sexes (25 males & 23 females). All patients received 8 months course of anti-TB.

Sputum was tested for AFB on registration, two weeks, 1, 2 and 8 months after starting treatment. Sputum culture for AFB were done at the time of registration and after 2 weeks. Venous blood was taken for blood complete, ESR and LFTs. All the investigations including chest radiographs were repeated at 1,2 and 8 months of treatment.

Both the groups were matched for age, sex weight, ESR, radiological score and the sputum AFB status. No statistically significant difference ($P > .05$) was found between two groups at the time of registration and after 8 month chemotherapy in

respect of clearance of sputum AFB, culture negativity, increase in body weight, reduction in ESR and radiological regression.

So far at the post treatment follow up visit two patients in the control group have relapsed and are on re-treatment reglimen, whereas no patients has relapsed in M. Vaccae group.

A degree of drug resistance was shown by the bacilli cultured from 8 out of 37 (21.62%) and one of them (2.7%) has multi-drug resistance. All the patients received the full course of ATT and were cured.

DIAGNOSTIC EVALUATION OF EXUDATIVE PLEURAL EFFUSION .AND THE ROLE OF PLEURAL BIOPSY.

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Pleural effusion is not a uncommon clinical and diagnostic problem. A prospective study was conducted in collaboration with the Pakistan Medical Research Council on patients with exudative pleural effusion, who presented to the chest unit at Lady Reading Hospital, Peshawar. The purpose of the study was to determine the underlying aetiological causes of exudative pleural effusion using various investigative procedures.

The study included 200 patients aged 15-80 years of either sex admitted in Lady Reading Hospital (LRH) from 1991-1996. Pleural biopsy and pleural aspiration were performed on all of them. Pleural fluid analysis provided definitive diagnosis in only 13 out of 200 patients (6.5%) where malignant cells were found in the pleural 51 patients (25.5%) showed neutrophils predominantly. The diagnostic yield of pleural biopsy was 70%. In 96 patients (48%) histological examination of the pleural biopsy revealed tuberculosis, 44 patients (22%) had malignancy and 60 patients (30%) showed chronic non-specific pleuritis.

Pleural biopsy was found to be more a useful investigation to diagnose the cause of exudative pleural effusion. Pleural fluid analysis failed to differentiate between the two most common causes of exudative pleural effusion ie, tuberculosis and malignancy in most of the patients. Age greater than 50, haemorrhagic pleural effusion ($P<0.001$) and coexistent pericardial effusion was in favour of malignant pleural effusion, while positive Mantoux test ($P<0.001$) was in favour of tuberculosis pleural effusion.

PNEUMOTHORAX : ETIOLOGY, COMPLICATIONS AND OUTCOME. A PROSPECTIVE STUDY.

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A study was performed in chest unit of PGMI to evaluate the presentation, etiology and management of pneumothorax and the complications which occurred and were dealt with in our setup. 60 patients presented with pneumothorax over a period of 2 years and 6 months (M : F = 2½:1). The pneumothorax was due to Pulmonary Tuberculosis (PTB) in 32 cases, Chronic Obstructive Pulmonary Disease (COPD) in 14 cases, Interstitial Lung Disease (ILD) in 2 cases, Staphylococcus Aureus pneumonia with abscesses in 1 case, Iatrogenic pneumothorax in 1 case, blunt trauma to chest in 1 case and 9 cases had Primary Spontaneous Pneumothorax (PSP). In most of the cases the intercostal tube was removed in the 1st two weeks after the lungs were fully expanded. Eleven patients were referred to thoracic surgeon for pleurectomies while another two died.

This study suggest that PTB and COPD are the more common causes of pneumothorax than PSP in our country contrary to the western literature.

AN EXPERIENCE WITH SURGICAL CORRECTION OF PECTUS EXCAVATUM DEFORMITY OF CHEST

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PECTUS EXCAVATUM is the most common, of all the congenital deformities of the sternum and ribs. This condition varies from very mild and hardly noticeable congenital deformity to the one that is more severe. 7 cases (5 males and 2 females) aged between 10-16 years with Pectus Excavatum were operated for symptomatic (2 cases) and cosmetic (5 cases) reasons. The object of the operation was to correct the deformity and relieve the patients from symptoms. The operative procedure used in all 7 cases was correction of the deformity and sternal fixation of the sternum with a metal sturt, which was Abraham Bar used in 6 cases and 1/3rd. tubural rod (used in orthopedic surgery) after improvisation was used in place of the former because of its non-availability. The bar was removed in 3 cases after more than 24 months of surgery as it was causing pain because of its displacement from its original position. The post-op results in these 7 cases were very good and recovery was uneventful. It is concluded that Pectus Excavatum is a surgical problem. therefore, it should be treated surgically. Even the removal of the bars in 3 cases, the correction was not affected as the sternum was fixed by this time and remained in the corrected position. Improvised 1/3rd. Tubural rod is a good substitute of Abraham Bar.

TUBERCULOSIS IN RENAL TRANSPLANTAT PATIENTS

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In developing countries tuberculosis after renal transplantation is a common problem. We have performed retrospective study of clinical presentation, problems in diagnosis and difficulty encountered in treatment of tuberculosis over a period of 10 years. Out of 435 transplants done during this period (54 (12.4%) developed tuberculosis. Infection occurred after a mean period of 10 months (range 1-90 months). Eleven patients (12%) had past history of treatment of tuberculosis. Majority of patients (80%) presented with prolonged fever without localizing symptoms or sign. Diagnosis was made on typical radiological appearance in 28 (52%) while Mycobacterium tuberculosis was isolated in 15 (28%.) Histological identification of caseating granuloma occurred in 8(15%). Rifampicin. INH. Ethambutol and Pyrazinamide were used Deposite increasing cycloporine dosage due to concurrent use of Rifampicin there were eight episodes of rejection after starting ATT and ten patients died of fulminapt tuberculosis.

Immunosuppression dramitically increases the risk of tuberculosis in transplant recipient in and grea of high prevelance. Incidence is highest in 1st year transplant presentation is atypical causing delay in diagnosis.

DOES TEACHING BY DOCTORS IMPROVES INHALER TECHNIQUE IN ASTHMA AND COPD PATIENTS?

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Objective:

To see whether teaching the patients correct method to use inhaler improves the technique subsequently.

Patients and Methods:

Patients with Bronchial Asthma and Chronic Obstructive Pulmonary Disease (COPD) In-patient + Out Patients who required Inhalers. All were adults who were cooperative and were not dsypnoic at rest. The study was done in 2 phases. In the first visit. their Inhaler technique with Method Dose Inhaler (MDI) was checked (if already taking it) and if incorrect, proper technique taught until the patients, demonstrated it correctly. In the second visit after one week of regular use the Inhaler technique was rechecked.

Results:

50 patients were included in the study, ages between 15 and 80 years, male and females were equal in number, All except 5 had used inhalers before for a variable time between 1 months and 22 years. The technique of using MDI was taught by chest physician mostly. The technique was divided into 9 steps starting from removing the cap to use of second puff. Only 6% patients scored 9/9. In the 2nd visit, 10% patients scored 9/9, 20 scored 8/9 and 12% scored 7/9, the rost could not perform even 7 steps properly.

Conclusion:

Technique of proper use of MDI is not acquired easily by patients. Many patients with several years of usage are still using MDI incorrectly. This emphasizes that Inhaler technique must be rechecked several times to improve the delivery of drug, or in such patients spacers should be used with Inhalers.

Key words: Metered Dose Inhaler. Technique, Asthma COPD.

A COMPARATIVE STUDY TO PROVE THE VERACITY & USEFULNESS OF STANDARD CONVENTIONAL CULTURE METHOD VS PCR BASED METHOD TO DIAGNOSE TUBERCULOSIS BY DETECTING M. TUBERCULOSIS IN LOCAL POPULATION.

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AFB smear culture on L.J. Medium has been a time tested method for detection of AFB for the diagnosis of tuberculosis (WHO). This method had been applied since its inception and its validity has never been challenged except the invitable delay in the culture process. New techniques like rapid radiometric method (BECTEC) and most tuberculosis from the suspected T.B. samples have been developed.

The PCR based method was compared with the STD conventional AFB culture method in this study.

The polymerase Chain reaction (PCR), using primers designed on the basis of Mycobacterium tuberculosis sequences were used to amplify DNA in local clinical samples of TB patients. Insertion element IS986 of M. tuberculosis belongs to IS3 family insertion seauences. Previously it has been shown to be present only in species belonging to M. tuberculosis compled and it exists in belonging to M. tuberculosis compled and it exists in multiple copies on the chromosome. We have investigated the significance of an IS986-based DNA probe for the diagnosis of tuberculosis after amplification of 541- bp fragment from IS986 by PCR. DNA was extracted from clinical samples and amplified by PCR in a thermal cycler by using a set of primers. The primers for PCR were based on the repetitive sequence (IS986) of M. tuberculosis. Two primers Pt-8 and Pt-9 correspond to bp 105 to 124 (5-GTGCGGATGGTCGCAGAGAGAT-3') and 626 to 645

(5'-CTCGATGCCCTCACGGTTCA-3'), respectively of the IS 986 sequence. Amplified DNA was detected by using agarose gel electrophoresis. 60 samples found positive by culture method were included in this study. The PCR results were compared with culture findings. Total 58 samples were found positive by PCR method out of total 60 culture positive samples. If there was no reaction error like strains of typical myco-bacteria and not that of M. tuberculosis compled, because the 541-bp amplification product was seen only when DNA from the bacteria belonged to M. tuberculosis complex (M. tuberculosis, M. Africanum, not the MOTT type but were therefore missed due to reaction error of the PCR.

PREVALANCE OF TYPICAL & NON-TUBERCULOUS MYCOBACTERIA IN A MIXED URBAN & RURAL POPULATION OF LAHORE (PAK).

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Chronic pulmonary disease resembling tuberculosis is the usual clinical presentation associated with non-tuberculosus mycobacteria. A few species are associated with cutaneous infections e.g. M. marinum and M. thermoresistible. infections caused by NTM are not considered transmissible from person to person however regional difference in the incidence of N.T. Mycobacteria diseases are quite striking.

The Genus Mycobacterium consist of 54 species, potentially pathogenic and saprophytic. A longitudinal screening of different species of mycobacteria was carried out during the period 1986-1996 at PMRC Research Centre, Department of Chest Medicine, King Edward Medical College, Lahore. A total of 1766 isolated strains of M. tuberculosis var.hominis. 2 strains of M. boyis and 15 strains of non-tuberculous (MOTT) were identified by STD biochemical tests and further classified. One (6.6%) photochromogens (Group-I). Three non-photochromogens (Group-III) and seven (13.79%) belonged to the repaid grower (Group-IV). These mycobacterial (46.6%) strains were isolated and identified mostly from admitted and out patients, reported to the Department of Chest Medicine at Mayo Hospital and other hospitals in Lahore (Pak). Only 7 NTM were disease associated where as the remaining 8 strains were casual isolated one strain was unidentified.

Non-tuberculosus mycobacteria were isolated and identified both from lungs and extra pulmnary infections in patients with pre-existing lung disease or even in rare cases without any significant lungs disease. The NTN in this study were invariably detected from all the 4 Rynyon groups. They were subject to drug sensitivity test which revealed a high percentage of drug resistance to anti-tuberculosus drugs. Although M. tuberculosis prevalence in our local population (U/R) is high, never the less prevalence of NTM is not uncommon. whenever found poor response to ATT in addition to drug resistance, non-tuberculosus mycobecteria should be considered.

DIAGNOSTIC ROLE OF PLEURAL BIOPSY IN PLEURAL EFFUSION

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Pleural effusion is a common clinical and diagnostic problem in Pakistan. The commonest cause of pleural effusion is presumed to be tuberculosis until proved otherwise. The objective of this study was to establish the diagnostic role of pleural biopsy in exudative pleural effusion. Fifty cases were selected who were clinically and radiologically diagnosed to have pleural effusion. Their age ranged from 20 to 80 years. Out of 50 cases 29 (58%) were diagnosed as tuberculous, 11 (22%) were malignant, 5 (10%) were suffering from chronic non specific pleuritis while no diagnosis could be made in 5 (10%) cases. Hence it is concluded that pleural biopsy is the most important investigation in establishing the diagnosis of pleural effusion.

EFFECT OF YOGA ON PULMONARY FUNCTIONS

Paper Presented by: Bhargava V.K.

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Practise of yoga is helpful in the prevention, control and rehabilitation of respiratory diseases. Yoga has been shown to improve respiratory functions which lead to physical and mental well being. Pulmonary function tests are important diagnostic measures to evaluate functions of of lungs. They provide quantitative measurement of physiological state of lungs. The present study was undertaken to study the effect of yougic exercise of pulmonary functions in two groups of healthy volunteers with and without practise of yoga. 62 healthy male volunteers in age group 18-45 years were divided into two groups of 31 each. One group was trained to practise yoga at a Yoga Centre for 3 months under the supervision of experts, while the other group served as control. Dynamic pulmonary function tests were performed at the beginning and at the end of three months it was observed that MVV, FVC, FEVI, FEV / FVC% FEF 25-75% and PEFR were significantly improved (P.001) in the group who had practised yoga while no change was seen in the control group. The result show that yoga is beneficial in various respiratory diseases.

COMPLIANCE OF ANTI TUBERCULOSIS THERAPY IN NORTH INDIAN PATIENTS - STUDY FROM A TERTIARY CARE HOSPITAL

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One of the important factors of treatment failure and drug resistance in tuberculosis is poor compliance. We analysed various causes of such poor compliance in 48 drug failure cases of pulmonary tuberculosis. There were 34 males (age range 16-65yrs.) and 14 females (age 14-80yrs). Most of them were from a poor socio-economic status with the monthly personal income being more than 1000 rupees only in 7 and the total family income exceeding this amount in 21. forty four of these patients lived in joint families with total family members verying from 6-15. Twenty could only get family support for their treatment. 28 were non-smokers and 16 were ex-smokers. 4 were drug addicts, whereas 15 were taking alcohol for varying durations. Three patients had received anti tubercular treatment 15-20 years back and 45, 2-5 years back. 40 patients changed various doctors (2-6 in number) because they were not satisfied with their physicians and there was no improvement in their symptoms. During initial prescription of the drugs, weight record was made in 24 cases (50%) only and the adequacy, mode of administration duration and explanation to the patient was satisfactory in 66% of cases. Most patients said that they left taking the drug before the prescribed duration because either they had symptomatic improvement (n=18); high cost of the drug (n-3); forgot to take (n=7), side effects (n=5) or they were not aware of exact duration (n=1).

Thus, the present study showed that a number of factors including socio-economic, physician and patient related factors are responsible for poor compliance and drug failure in pulmonary tuberculosis. Constant patient education is essential to overcome this problem.

CLINICAL IMPACT OF SUBSTITUTING ARM SPAN FOR STANDING HEIGHT IN INTERPRETING SPIROMETRY

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Impact of substituting arm span for standing height in interpretation of spirometry data was examined in a prospective open study. 228 patients undergoing spirometry parameter (FVC, FEV_1, FEV_1/FVC, PEFR & $REF_{25\%-75\%}$) was derived based on arm span and height using regression equations previously derived by us. Results were classified into normal, obstructive or restrictive defects for each height and arm span measurement, and any abnormality categorized as mild, moderate or severe. Arm span exceeded height in 182 (79.82%) subjects. 37(162%) results were mis classified when arm span was substituted for height, with a kappa value of agreement of 0.779. Although the absolute differences in predicted values based on arm span and height were significant ($p<0.001$), the coefficient of variation was small. Thus the changes produced by using arm span instead of height in interpreting spirometry are not of much clinical relevance. We conclude that arm span can be directly substituted for clinical interpretation of spirometric data in patients where standing height cannot be adequately measured.

ROLE OF PLEURAL BIOPSIES IN DIAGNOSIS OF PLEURAL EFFUSION

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Pleural effusion is a common clinical diagnostic problem. It is not possible to diagnose the underlying etiology on the basis of radiological and naked eye appearance of pleural fluid. We conducted a prospective study in patients who presented with pleural effusion to the department of Thoracic Medicine Jinnah Postgraduate Medical Centre, Karachi.

We studied 100 patients, who were clinically and radiologically diagnosed to have pleural effusion, out of these 67 were males and 33 were females. Age range was from 16 years to 80 years.

In 20% of biopsies, we failed to obtain a pleural tissue, 40% revealed normal o non diagnostic pleural changes and 40% provided a diagnosis of pleural effusion.

Tuberculosis was histologically confirmed to be the main cause in 64.6% cases where as in 21% cases malignancy caused the pleural effusion. In 14.4 cases the pleural biopsy result was non specific reactive changes.

Comparing the relevance of other investigations it was noted that fluid anlaysis in our study failed to differentiate the tuberculosis from malignant effusion as all the specimens in both groups were exudative, almost all showed more then 70 lymphocytes and non were positive for AFB.

Only 8 fluid specimen showed malignant cells out of the 21% confirmed histologically as malignant. Similarly ESR, Montoux Test & sputum AFB were also unhelpful.

We concluded that pleural biopsy in our setting is the single most important investigation to confirm the cause of pleural effusion.

KYE WORD:- Pleural Biopsy

AUDIT OF HOSPITAL MANAGEMENT OF SEVERE ACUTE ASTHMA.

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Medical audit is relatively new concept in developing countries like Pakistan. A regular audit can greatly improve the quality of medical care. Audit of any system is done to see the deficiencies of that system and then to improve it.

Similarly we did medical audit of our patients suffering from severe acute asthma admitted in chest unit. The purpose of our audit was to see deviations of our management from international guidelines.

We found that 35% of patients had no PEFR and in 56% blood gases was not done at admission. Systemic steroids were given to 100% of cases. Inhaled and oral steroids were given to 86% and 97% of cases respectively at discharge. Good advise at follow up was given to all but no written plan to any patient.

We conclude that despite maximum efforts and all the facilities available in our unit there have been several deficiencies in the management of severe acute asthma. The most notable being the lack of blood gases analysis and PEFR recording on admission.

PREVALENCE AND CLINICAL CORRELATION OF MYCOBACTERIA OTHER THAN TUBERCULOSIS (MOTT)

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Objective: MOTTs are present in the surrounding environment (water and soil) and sometimes colonize normal population or even patients with lung disease, so it seems important to prove the infectivity and also to determine the prevalence of these mycobacteria.

Methods: Patients suspected for having lung disease due to MOTT were clinically and radiographically examined. Their sputa were collected in at least three separate occasions. If the patient failed to expectorate, bronchial washings through bronchoscopy were collected. In children, the specimen was obtained by gastric lavage. Smear and culture of samples obtained by any one of mentioned methods were studied. Species typing was done by performing differential tests on the cultures.

If culture of sputum, bronchial washing or gastric lavage was positive for three times or if MOTTs were detected in biopsies specimens of the lung, the person was considered affected.

Results:

Of 1158 studied specimens, 817 were sputum, 279 bronchial washing and 62 gastric lavage, M. tuberculosis were detected in 71 specimens and MOTTs were present in 11 cases. The species of these 11 MOTT were as follows 4 cases of M. Kansasii, 2 cases of M. avium intercellular, 2 cases of M. asiaticum and one case of M. xenopi and M. malmoenese each. One species cold not be exactly defined which consists 13% of all cases.

Symptoms in tuberculous patients were: Cough 93.7% dyspnea 85.1%, fever 83.2%, sputum 70.3% chest pain 53.7%, hemoptysis 15.4%. Clinical examination revealed: Normal 70% diffuse crackle 12%, wheezing 3%, decreased breath sounds 5%.

Symptoms in MOTT patients were cough 95%, sputum 97%, Fever 2% Clinical examination revealed: normal 73%, crackle 22%, wheezing 5%.

Among 11 cases of MOTT, only 2 were diagnosed as patients who both had an underlying disease.

Conclusion:

Culture of specimens and species typing is necessary for confirmation of tuberculosis so direct examination of smears seems inadequate; because detection of atypical mycobacteria in healthy individuals is not indicative of disease however, in persons with underlying lung disorders like bronchiectasis, fibrosis and cavitation, they may generate disease.

" A CLINICAL STUDY OF LOWER LUNG FIELD TUBERCULOSIS".

Dr. H. P. Ramesh,
Professor and HOD of TB and CD,
Government Medical College, PKTB and CD Hospital,
Mysore 570 002, INDIA

A prospective study from August, 1995 to July, 1997 was carried out at the above hospital. 8,317 patients admitted, out of which 2,095 were sputum positive for AFB. From the total sputum positive of 2,095 55 cases of lower lung field Tuberculosis with a prevailance of 2.63% were found.

Clinical, Radiological and Bacteriological assessment of subjects based on age, sex have been carried out to compare the findings of other studies done in India and abroad.

A considerable proportion of sputum positive pulmonary Tuberculosis patients had lower lung field leisions. This becomes an important clinical discretionary thought to rule out lower lung Tuberculosis.

"CHEMICAL STERILISATION - A RECENT TREND IN BRONCHIAL ASTHAMA"

Dr. H.P. Ramesh,
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Bronchial Asthama, a respiratory problem, classified as wet and dry asthama, has been studied prospectively both on OPD and inpatient basis. Several hundreds of cases to assess the place of chemical sterilisation of the lungs among selected cases of wet Asthama patients, have been carried out at the above hospital.

35% of the total Asthmatic patients can get 100% relief in a span of six months of treatment. Remaining patients are greatly benefitted by carrying out chemical sterilisation with selective broad spectrum Anti Biotics for three consecutive months along with various management procedures depending upon age, sex and other para meters of individual cases.

BIOMASS FUEL POLLUTION, RESPIRATORY SYMPTOMS AND LUNG FUNCTIONS - A COMPARISON OF INDOOR AND OUTDOOR KITCHENS IN A RURAL AREA

HS Malhotra, J Kanwar & BK Sharma

To test the hypothesis that lung functions should be worse on women who cook with biomass fuel indoors as compared to those who cook outdoors, lung functions and incidence of respiratory symptoms of 100 women cooking in indoor kitchens was compared with those of 100 women cooking outdoors. The mean age, height, weight and duration of cooking were comparable. No statistical difference was found in the lung function tests and respiratory symptoms between these two groups. Among women cooking indoors, no difference was found in these parameters of those whose kitchens had adequate ventilation and of those who had poorly ventilated kitchens. It is postulated that accumulated smoke due to cooking indoors does not have an additive effect on any possible ill effects of direct exposure to smoke of cooking.

AN AUDIT REPORT: ANTI TUBERCULOSIS ACTIVE AT PERIPHERAL OGDC PUBLIC DISPENSARY IN COLLABORATION WITH INSTITUTE OF CHEST DISEASES KOTRI.

JAWED AHMED SHAIKH, ABRA ALI KHAN, NASIM AHMED QAZI

Anti tuberculosis activities of OGDC Public Dispensary are carried out in collaboration with ICDSK at Tando Allam Village at the periphery of District Hyderabad. It has catchment of areas of whole Hyderabad Taluka because of easy transport facilities here. During the year Oct: 96 to Sept.. 1997, 245 cases were registered as cases of T.B. in addition to 143 cases already on anti-T.B chemotherapy. The pulmonary and EPT were 229 chemotherapy. The pulmonary and EPT were 229 (93.5%) and 16 (6.5%) respectively. The sm +ve pulmonary cases were 119 (48.5%) and were classified 59 (24.8%) as new, 29 (11.8%) as Treatment Failure, 7 (2.8%() relapses and 14 (15.6%) as Treatment after default cases. The sputum conversion was 90.2%. 73.7% (135) completed treatment while 16.3% (30) defaulted. 9.8% (9) cases were declared as Chronic cases.

We conclude that short course chemotherapy can effectively achieve WHO REQUIRED CONVERSION RATE in our setting.

DIAGNOSTIC EVALUATION OF FINE NEEDLE ASPIRATION BIOPSY IN LUNG CANCER

Khalid Waheed, Shamshad Rasul*, Zafar H. Iqbal*, Nadeem Anwar*, Abdul Majeed Akhtar*, Irfan Khurshed*, Seema Mazhar*

ABSTRACT

A prospective study on 30 cases of suspected lung cancer was carried out to evaluate the yield of Fine Needle Aspiration cytology (F.N.A.C) at the Institute of Chest Medicine Mayo Hospital Lahore from Jan. 1997 to Aug. 1997. FNA was performed in 30 cases. Among these, 26 (87%) were males and 4 (13%) were females. Their age ranged from 30-75 years. FNA was performed under ultrasound guidance. In 21 (70%) patients cytologic examination revealed malignancy while in 3 (10%) cases underlying malignancy was suspected and no diagnosis could be made in 6 (20%) patients. Among 21 (70%) malignancy proven cases 14 (66.6%) had squamous cell carcinoma while 6 (28.6%) had adenocarcinoma and 1 (5.8%) suffered from small cell carcinoma. Three (10%) patients developed pneumothorax. Out of these, two patients developed pneumothorax resolved spontaneously and only one needed chest intubation, Four patients (13.3%) complained of chest pain. The present study reveals that ultrasonographically guided percutaneous fine needle aspiration biopsy/cytology is a safe, quick and reliable method for establishing the cytological diagnosis of lung cancer in the cases where bronchoscopic help is not available or the tumour is not within the reach of bronchoscope.

KEY WORDS: F.N.A.C. = Fine Needle Aspiration Cytology Sq = Squamous CA = Carcinoma = PTX Pneumothorax.

BAL FOR THE DIAGNOSIS OF UNUSUAL PULMONARY INFECTIONS IN RENAL TRANSPLANT RECIPIENTS.

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Infections are the major cause of morbidity and mortality in renal transplant recipients, especially in the early post-transplant period. Lungs are the commonest site of infection by opportunistic organisms. We prospectively assessed the utility of broncho-alveolar lavage (BAL) in diagnosis of pulmonary infections in renal transplant recipients. All patients presenting with pulmonary infections were subjected to a bronchoscopic examination and BAL if they failed to respond to a 5-day trial of antibiotics or if the clinical features were suggestive of infection with a unusual organism. Over a 18 month period, a total of 32 bronchoscopies were performed on 29 patients. Twenty patients presented within first 6 months of transplantation. The mean age of the patients was 37.5 ± 7.6 years and the interval between transplant and presentation was 8.3 ± 4.5 months. The presenting features were fever (80.6%), cough (67.7%) and progressive dyspnea (45.2%). Significant sputum production was seen only in 5 patients (16.1%). The major radiographic findings included peri-hilar and/or basilar infiltrates (87.1%) consolidation (22.6%) and pleural effusion (12.9). Hypoxia ($PaO_2 < 70$ mm hg) was present in 11 patients (41.9%).

A total of 28 organisms were identified in 21 patients, with 4 patients having more than one infection Twenty one organisms were identified on BAL fluid analysis and 4 on sputum examination. Organisms included Mycobacterium tuberculosis (9 cases), Pneumocystis carinii (7), Aspergillus (5), Candida (3), Pseudomonas aeruginosa (2), Nocardia and Mucor (1 each).

Therapeutic decisions had to be changed after identification of organisms in all patients. Nine patients died and no organism could be identified in 2 of them. Seven patients died within 48 hours of admission with overwhelming sepsis and 2 died of liver failure. In conclusion, the exact eitologic diagnosis of unusual organisms causing pulmonary infections is important for proper management of renal transplant recipients and requires an aggressive approach including early bronchoscopy and analysis of BAL fluid.

FIBEROPTIC BRONCHOSCOPY-ROLE IN THE DIAGNOSIS OF BRONCHOGENIC CARCINOMA

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Fiberoptic bronchoscopy is increasingly used in the diagnosis of lung diseases. The present study has been performed in the Institute of Chest Medicine, Mayo Hospital, Lahore from June 1996 to July 1997 to evaluate the role of fiberoptic bronchoscopy for the diagnosis of bronchogenic carcinoma. One hundred patients (83men, 17 women, mean age 57.3 years) who had clinical and radiological suspicion of underlying malignancy were included in the study. All patients had bronchial biopsies, brushing and washings. The peak age incidence was found in sixth decade. Smoking history was positive in 83% cases. Radiologically., right lung was more frequently involved than the left lung (59 vs 41). On bronchoscopy endobronchial mass was the most common lesion found in 61% cases. The biopsy specimens gave positive results in 52%, brushing in 63% and washings in 8% cases, while the overall combined positive yield was 71%. The positive yield difference between bronchial biopsies and brunshings was not significant ($P > 0.05$). But it was significant between bronchial biopsies and washings ($P < 0.001$) and also between bronchial brushing and washings ($P < 0.001$). Squamous cell carcinoma was the most common cell type and adenocarcinoma was more frequently found in women. It is concluded that for the diagnosis of bronchogenic carcinoma, an early fiberoptic bronchoscopy is desirable and to have maximum diagnostic yield bronchial biospy should be combined with cytology using brushing and washings.

MDR-TB-ROLE OF YOUNG MEDICAL GRADUATES

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Tuberculosis continues to be a slap on the face of scientists as we have all the means to cure it in the form of potent anti-tubercular drugs, yet it continues to be a major health problem. In mid eighties we even talked of eradicating tuberculosis is globally but today with the emergence of drug resistant tuberculosis, eminent scientists like Sir John Crofton predicted that the treatment of MDR-TB is going to be as difficult in future as the treatment of the tuberculosis in the past.

There are various factors for the emergence of MDR - TB, some are related to the disease which are beyond our control while others are within our control and out of the later factors one major factors is the physician factor.

In our study we have studied the role of young medical graduates who had just completed their internship or are doing first year junior residency were given five typical x-rays of different appearances of tuberculosis and asked to fill the questionnaire. Only 4% of the graduates reported all the x-rays correctly while 32% had 2 or more wrongly diagnosed x-rays, 4% did not give any importance to sputum examination. Only 20% doctors gave importance to history of previous chemotherapy. As far as the treatment of MDR-TB is concerned only 20% graduates wrote correctly the treatment of MDR - TB.

INCIDENCE OF HEPATITIS IN PATIENTS TAKING ANTI TUBERCULOSIS TREATMENT

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In present study, incidence of hepatitis has been studied in patients taking Anti tuberculosis treatment (ATT) who were admitted in Institute of Chest Medicine, Mayo Hospital, Lahore during the months of June, July & August 97. During this period, 133 patients were put on ATT and among those 68 (51.13%) were male and 65 patients (48.87% were female. Out of 133 patients, 11 (8.27%) developed jaundice (Male 7 % female 4). Age range was 16-80 years but 8 out of 11 (72.72%) were above 35 years of are. Time interval between start of ATT & appearance of jaundice varied between 3 days to 92 days. All the patients were on Rifampicin (R), INH (H), Ethambutol (E) and Pyrazinamide (Z). On appearance of jaundice, RHZ were stopped and patients were continued on Streptomycin (S), Ethambutol (E) and ciprofloxacin (cipro). Two out of 11 patients died during the treatment although their liver function tests were showing favourable response. Eight patients are being followed to-date. Jaundice disappeared in all eight patients in 12-60 days. ATT is generally well tolerated. In the present study the incidence of jaundice is 8.2% which is higher than previously reported studies. Secondly majority of those who developed jaundice (8 out of 11 i.e. 72.7%) are above 35 years. Therefore, it is recommended that patients who are more than 35 years of age and receiving ATT should be closely watched for evidence of drug induced hepatitis.

DIAGNOSTIC VALUE OF SPECIFIC ANTI-MYCOBACTERIAL IgG

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ɔecific IgG levels, against *Mycobacterium tuberculosis* crude ıtigen (Mtc), in the sera of 100 bacteriologically confirmed ıses of pulmonary tuberculosis were measured employing LISA. IgG levels were determined before starting chemotherapy ıd after 8 weeks. Fifty apparently healthy persons were included ; control group. All the sera were tested at 1:200 dilution. Mean ;G levels (OD at A492) in healthy group was 0.78 (SD 0.029) ıd in tuberculosis patients 0.135 at the start of chemotherapy ıd 0.138 after 8 weeks of treatment. Taking cut off point of ıean + 2SD of normals, results depicted specificity of 94% and ːnsitivity of 62%. The sensitivity was highest (81.8%) in ıtients with advanced lesion and 62% in patients with moderate ːsions. It was lowest (47.1%) in persons with minimal lesions. hus sensitivity may be further lowered in asymtomatic infected ersons.

ISONIAZID INDUCED FOOT DROPS (A CASE REPORT)

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Foot drop occurs in both traumatic and non traumatic diseases affecting peroneal nerves like diabetic neuropathy, polyarteritis nodosa etc. Some Myopathic diseases like progressive muscular atrophy, Peripheral type of muscular dystrophy and peroneal muscular atrophy may present as food drop in addition to other clinical presentations. We are reporting a case in which Foot drop occurred after taking 180 mg/day INH for 15 days.

A 23 year old man weighing 35 kg presented with a 6 month history of generalised abdominal pain, fever and weight loss; and a 3 months history of loose watery motions. He was diagnosed as Intestinal tuberculosis following clinical and investigation protocol. Anti T.B. treatment including Isonizid 180 mg, Rifampicin 360 mg, Ethambutol 675 mg and Pyrazinamide 900 mg per day was started. During the course of treatment he developed a massive gastrointestinal bleed. ATT was discontinued after 8 days and patients underwent an exploratory laparatomy. Removed gut revealed tuberculous on histopathology. On 9th post operative day when the total duration of ATT was only 15 days he developed bilateral foot drop with sensory loss on the dorsum of the feet and lateral aspect of the lower half of the legs. In NCV'S, motor NCV'S were unobtainable in both personal nerves. EMG showed denervation potential in tibialis anterior only.

Patient was treated with pyridoxine and other injectable vitamins, physiotherapy including electric stimulation was given. ATT was restarted excluding INH but there was no improvement in the neurological deficit.

This is perhaps the first reported case of bilateral foot drop associated with INH in this country.

SURVEY OF KNOWLEDGE, ATTITUDES AND PRACTICES FOR TUBERCULOSIS AMONGEST FAMILY PHYSICIANS.

Dr. Muhammad Hussain Dr. S. Sarwar Hassan.
Dr. Nadeem Rizvi

nnah postgraduate Medical Centre, Karachi.

he purpose of the study was to investigate the knowledge, titudes and practices pertaining to tuberculosis amongst general hysicians. It was a questionnaire based study in which 150 eneral physicians were interviewed.

1.33% of the general physicians considered that tuberculosis is ot a serious problem in Pakistan and 29% were of the view that CG vaccination causes unwanted effects with no or limited use ilness. only 38.66% general physicians relied on sputum nalysis for diagnosis. Majority of general physicians were rescribing the drugs which are classified currently as non-commendable.

he conclusion drawn from this study, is that many isunderstandings were found in the field of transmission and CG vaccination. Index of suspicion in high, but method of iagnosis, treatment and monitoring of treatment by and large is ot satisfactory.

ey Word:- Practice- Pulmonary Tuberculosis.

STUDY OF DRUG RESISTANCE TO ANTI-TB. DRUGS (INITIAL & ACQUIRED) IN PGMI. LRH. PESHAWAR.

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579 C/S tests were done from Jan. 1993 to June 1997 in I.C.D laboratories. These specimens were from the chest until of L.R.H Peshawar on patient who had treatment failure, relapse or chronic TB.

The acquired resistance rates to individual drugs were.

Streptomycin.	INH.	Ethambutal	Rifampicin	Pyrazinamide	Thiocetazone
46%	49%	41%	49%	53%	23%

Multiple resistance results were as follows,

Sensitivity to all	R to 1	R to 2	R to 3	R to 4	R to >4	Total Resistance
30%	6%	12%	13%	15%	24%	70%

Apart from the acquired resistance we also studied the primary resistance in 39 patients, as a part of another study. The resistance to the individual TB drugs was as follows:

S = 10% H = 5% R = 5% Z = 23% T = 8%

The resistance to multiplerugs was as follows.

S to all	R to 1	R to 2	R to 3	R to 4
74%8%	5%	10%	3%	

The situation of the primary and acquired resistance rate are alarming and underlines the need for reducing the default rate by both public and medical personnel education, well organised TB. control programmes, lack of which is the main reason for resistance to the T.B drugs.

PNEUMOTHORAX-VALVE DRAINAGE OF PLEURAL CAVITY - MODIFIED VERSION OF HEIMLICH (FLUTTER) VALVE.

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Dr. Nasir Mehmood
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A modified version of Heimlich valve (flutter) was designed in a form of ordinary air balloon, which was connected with intra thoracic catheter in place of under water seal.

Total 10 patients were studied, no significant morbidity was recorded and we found that a balloon valve can be a simple cheap & effective alternative Hemilich (flutter) valve.

KEY WORD:- Flutter Valve - Balloon Version.

BCG VACCINATION DOES IT PROTECT AGAINST TUBERCULOSIS? (CHILDREN AGE UPTO 12 YEARS)

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To review the set criteria for the use of BCG vaccination as part of National Immunization Programme. To determine the protective effect of BCG vaccination in the prevention of tuberculosis (children age upto 12 years). To find out the risk factors for the causation of tuberculosis among cases to that among controls.

Matched case control study done on 600 individuals with case to control ration 1:1 age, sex and socio-economic status taken as matching factors.

The study shows that BCG is not protecting our population (children age upto 12 years) from tuberculosis. Among vaccinated cases 67.14% were suffering from pulmonary tuberculosis, 10% from haemoatogenous form of tuberculosis and 22.86% from glandular tuberculosis while among non-vaccinated the proportion was 62.5, 20% and 17.5% respectively. Low educational status of mother and history of tuberculosis in the family are two risk factors for causation of tuberculosis.

KEY WORDS: BCG Vaccination - protection.

SPONTANEOUS PNEUMOTHORAX

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prospective study of 25 cases of Spontaneous Pneumothorax is carried out in the Institute of Chest Medicine Mayo Hospital hore during a period of one year (1996-1997) regarding ology and outcome of closed thoracostomy the drainage as a atment modality. Twenty (80%) cases were males and 5 (20%) re females. The age incidence varied from 16 to 70 years. ighest incidence 14 (56%) cases as observed in the age group -30 years. In 9 (36%) cases no underlying cause was found, 8 2%) cases had pulmonary tuberculosis, 6 (24%) had underlying OPD, 1 (4%) had squamous cell carcinoma and 1 (4%) had yptogenic fibrosing alveolitis. Closes thoracostomy tube rainage was performed in 21 (84%) cases while 4 (16%) cases ere managed conservatively by rest and oxygen therapy. Two 8%) cases having recurrent Pneumothorax were treated with tracydine chemical pleurodesis. Seven (28%) cases developed ubcutaneous emphysema which resolved spontaneously and 1 4%) case had wound infection. In 1 (4%) case lung failed to xpand was referred to chest surgical unit for thoracotomy. uberculosis was found to be the commonest cause of pontaneous Pneumothorax. Chest thoracostomy if performed arlier with correct technique gives the best result.

FLOATATION METHOD FOR BACTERIOLOGIC DIAGNOSIS IN PULMONARY TUBERCULOSIS

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The bacteriologic diagnosis of Pulmonary tuberculosis is established by demonstration of acid-fast bacilli in the sputum. It is done by direct smear examination of the sputum by Ziehl-Neelsen's method. Attempts have been made to improve its efficacy by cold staining, concentration methods, fluorescentce method and floatation technique.

A study was undertaken to evaluate the efficiency of floatation method as compared to direct smear for bacteriologic diagnosis. 2 ml sputum obtained from the patient is mixed with an equal volume of bleaching solution and shaken for 1 to 2 minutes and kept for 30 minutes at 30°C. It is then diluted with distilled water in a ratio of 1:5. After addition of 0.5 ml xylol the contents ar shaken for 2 minutes and allowed to settle for 3 minutes. The creamy layer formed on the surface is removed and a thick smear prepared and treated with ether for a minute and dried. It is stained by Zeihl Neelsen method and examined under the microscope.

Results: The direct smear and floatation methods done on 186 sputum samples gave positive result in 33.65% and 44.68% respectively. Floatation technique gave higher yield in minimal lesion and non-cavitary lesion compared to direct smear. The results of other workers have varied from 42% to 55.8%.

conclusion: Floatation method is superior to direct smear in case finding and it does not require any special equipment or specially trained personnel. This simple technique is economically feasible in developing countries.

MANAGEMENT OF TUBERCULOSIS WITH CHEMOTHERAPY

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ıagement of Tuberculosis with Chemotherapy has 'olutionized the treatment of Pulmonary and Extra Pulmonary berculosis. However the effect of Chemotherapy is determined Bateriological, Metabolic, Environmental, Pharmacological l Combination of Drugs. Excellent results are obtained in the ients who are given E (or S) HRZ/ EHR for the first 3 months l then EHR for the next 6-9 months when the sensitivity results not known. In relapse Pulmonary Tuberculosis HRZES for first 3 months and 6-9 months of EHR is recommended.

ıfortunately due to poor compliance of the drug intake by the ients and many other factors chronic treatment failures with ıg resistance is the real big problem for which at least 3 of the lowing agents not previously used are given under supervision. ıionamide/Prothionamide; Cycloserine; PAS; ıamycin/Amikacin; Capreomycin; Viomycin; Thiacetazone; profloxacin/Ofloxacin. These drugs have to be taken for at ıst 12 months. Unfortunately the cost of these second line drugs much more than the primary 5 drugs mentioned above.

)TS (directly observed treatment, short course) As advocated WHO, we will not only cure majority of the active ıberculosis and prevent thousands of deaths from Tuberculosis preventing infections to others. It is very important to ınvince the patient and his family to complete the full course (9 12) months).

FAMILY DOCTORS AND TUBERCULOSIS CONTROL

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Tuberculosis is one of the major health problems in Pakistan. Whatever the reasons m ay be, majority of the patients prefer to consult private doctors rather than going to the Government Hospitals. These private doctors treat all types of diseases including tuberculosis. Very recently the Government agencies have become active and have published national guide lines for the tuberculosis control programme. Two groups of doctors were interviewed, 87 practising in the community and 25 appearing in the Punjab Public Service Commission for the post of Medical Officers. The study reveals deficiencies in the management of tuberculosis by the family physicians. There is no proper way to update their knowledge. They prescribe inadequate regimens and frequently underdose the patients. This non compliance on the part of the doctors can further worsen the situation of multi-drug resistance in the country. There is a need to incorporate these doctors in national tuberculosis control programme.

ABDOMINAL TUBERCULOSIS: A CLINICOMORPHOLOGICAL STUDY

RAHAT SARFRAZ, SAEED AKHTAR KHAN, NASEER AHMED CHAUDHRY

'one cases of intestinal tuberculosis were found in a total of resected intestinal specimens studied at PGMI, Lahore. imum number of cases were in 20-29 years age group, ving a female preponderance. Pain was the commonest enting complaint. Haemoglobin estmation revealed anaemia 2.35% cases and ESR was raised in 90.32% cases. Ileum was commonest bowel segment involved in cases of intestinal rculosis. Mean length of resected specimens in these cases 26.6 ± 16.31 cm. Hypertrophic lesions and enlarged enteric lymph nodes were the comments findings on gross nination. On Florescent (Auramine-Rhodamine) staining 40 43%) cases were AFB positive.

FREQUENCY AND TYPE OF REACTIONS TO ANTI TUBERCULOSIS DRUGS

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This prospective study was performed to evaluate the side effects of anti tuberculosis drugs in short-course chemotherapy.

A total of 102 patients aged 8 to 81 years (Mean age 50.6±20.2) with the diagnosis of pulmonary tuberculosis during 1996-1997 entered the trial, they all were treated according to W.H.O standard protocols either for category I (79.4%) or category II (20.6%).

Analysis of drug reaction was carried out by age, sex, ethnic group, addiction and underlying disease, type of drug, duration of treatment and reactions. Frequency of reactions were 20.5% in male (21 patient) and 18.6% in female (19 patient). Rate of reaction was higher in the elderly aged 60 or over (22.2%(). 33 patients: (32.3%) were Iranian and 8 cases (6.8%) were Afgani Clinical adverse effects were classified as major and minor. 126 (25.4%) minor reactions and 14 (13.%) major reaction were detected in patients, Major side effects include clinical hepatitis 9.8%, vestibular involvement 1.9% generalized seizure 0.9% and thrombocytopenia 0.9% While hyperuricemia 6.8%, arthralgia 6.8^, increased transaminase level 5.8% and G1 upset 5.8% were considered minor side effects, All reactions appeared in 3 to 6 weeks of therapy. Management of drug r eactions were carried out according to W.H.O guidelines. Accordingly, in two casess selected drugs had to be discontinued; one due to Rifampicin-induced thrombocytopenia and the other, due to vestibular damage following Streptomycin administration. Conclusion: the observed rate of drug reaction (13.7%) in this study is higher than those reported in other studies, which required further investigation and probably modification of therapeutic regimens.

MASS LESIONS IN TUBERCULOSIS

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culosis is a global health problem accounting for 26% of all es in developing countries. In Pakistan 1.5-2% of the ation is suffering from active disease while >80% of adult ation has been infected. Tuberculosis can virtually effect rgan in the body and may present with a variety of clinical ems. On reactivation or re exposure to live mycobacteria is an intense and localised tissue reaction which is mediated arious cytokines. This results in localised nerosis in an pt to limit the disease process. Such necrotic areas ularly in extrapulmonary sites coalesce to form large lesions mass effect. Desirable results with treatment can be ved only if chemotherapy is combined with drainage dures.

LIMITATIONS TO THE OPTIMUM AEROSOL DELIVERY

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Inhalational therapy is marked by rapid onset and greater degree of bronchodilation with increased potency and low cost. Inhalable drugs are available in the form of MDIs, and Nebulizers. Effectiveness of inhalational therapy depends upon the mass of stable and suspendable particles delivered to the lungs. Final deposition within the lungs depend upon the restorable fraction of aerosol available and the pattern of breathing.

For optimum and effective deposition of aerosol within the lungs understanding of Inhalational technique as well as aerosol generation are equally important.

PRESCRIBING TB DRUGS - A QUALITY CONTROL STUDY

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ear ago, a TB surveillance system was founded in AKUH. f its tasks is the quality control of TB treatments according IO guidelines. Therefore, the aim of this study is to assess rectness of prescriptions for TB drugs according to the age eight of the patient, the category of the disease, and the of the treatment. We present data on 125 prescriptions. have been collected from the pharmacy department at which is one of the places where patients are monitored ir management and compliance.

125 prescriptions. 79 were on patients of category 1, 7 of y II, and 29 of category III. Ten patients could not be ly categorised (category 0), but were usually treated for ly evaluated pulmonary TB. Eighteen patients were under of 15 years which required an adjusted dosage scheme. ing to WHO guidlines, a correct 4-drug combination for ies O and I in phase I was administered in 73% of . A correct 3-drug combination for category 3 phase I was n 21% of cases. A 5 drug combination for category 2 was correctly used in 33%. A correct 2-drug combination gories 0.1 and 3 phase 2 (HE & HR) was administered in

prescriptions. the treatment phase could be assessed and e, the correctness of the drug combination Sixty patients were given the correct treatment in dependency of the and the phase according to WHO standards.

ient's weight was available in 101 prescriptions. Thereof, %) showed a correct adjustment of the dosage to the al weight. In 92 prescriptions, both data sets were

available, but in only 40 prescriptions (43%) both, the combination and the dosage, were correctly following WHO guidelines.

In conclusion, there is a great need for improvement which may be achieved by further familiarising treating practitioners with the WHO guidelines regarding dosage and combination of TB drug regimens, as well as by performing more extended and effective quality controls.

'ACT OF INTEGRATION F TUBERCULOSIS :ONTROL PROGRAM IN HEALTH CARE NETWORK OF VARAMIN DISTRICT.

S. Salek, M.R. Masjedi, A.A. Velayati.

tive: to determine to impact of integration of tuberculosis l program in health care network of Varamin.

g: Varamin district has 326000 urban and 100000 rural tion (total: 426000) with 63000 afghan immigrants.

cated in 45 Km southeast of Tehran.

istrait has 17 health care centers, 30 health houses and 2 ils.

ı: Prior to performing our study, the following evaluations nade

ısment of knowledge of people and health workers about ılosis

sment of case finding during the last two years

ing programes for physicians, health experts and primary workers in the form of training seminars were mmed and performed. For two weeks, one physician as t coordinator for tuberculosis and 2 lab technicians for ulosis microbacteriology lab were trained.

› microbacteriology laboratory units were facilitate and to work from 16. Jan. 1996 For the purpose of quality l during the performance of the study, all smears and 85% ative smears were rexamined by mycobacteriology experts ional Research Institute of Tuberculosis and Lung Disease.

›dology:

:s of health workers at different levels were determined and ary training were given.

th workers at health care centers, private clinics and health houses were to obtain 3 sputum samples (2 samples at the time of visiting and 1 morning sample) from all patients with chronic cough for more than 3 weeks and to complete a case-finding form for suspicious cases.

- Sputum samples along with case-finding form were then sent to lab and the results were announced to the referring unit by coordinating physician. All patients either smear positive, smear negative or extrapulmonary tuberculosis are recorded in the registration book of the district. The family members of smear positive cases especially under 6 years are completely followed for case finding.

Results:

- By integration, more cases than previous years were detected

- Ratio of smear positive pulmonary tuberculosis to total tuberculosis patients has increased.

- By having a good system for recording and reporting we have achieved a better description of patients regarding their nationality, geographic distribution, age distribution, sex and also the methods of diagnosis and history of treatment.

HYDATID CYST IN LUNG: A REVIEW OF 64 CASES

lar Ali Bhatti, Shabbir Raza, Muhammad Ihsan Khan

d cyst of lung is still not an uncommon problem. We ed the record of 64 cases where thoracotomy was done in Devi Chest Hospital and post operative diagnosis of d Cyst was conformed. Majority of patients had well ıscribed rounded opacity. All these cysts were removed sfully. Out of those 28 were males and 36 were females. roup most commonly affected were between 15-40 years ge group. History of contact to be dogs and sheep were in 32 patients; Out of them 6 cases were i/Compliment Fixation Test negative. Only 6 patients had daughter cysts on contralateral side. Tablet Mebendazole ınd all the patients showed disappearance of cyst within 3 s.

PULMONARY TUBERCULOSIS IN DRUG ADDICTS VERSES NON DRUG ADDICTS

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Drug addiction and pulmonary tuberculosis are serious public health problems prevalent in Pakistan. There has been a tremendous increase in the prevalence of drug abuse in Pakistan in the last three decades. A retrospective analysis of 100 patients presented who were admitted in Deptt. of Chest disease and tuberculosis AIMC Lahore in the years 1966-97 and were suffering from pulmonary tuberculosis: 50 drug addicts and 50 non-drug addicts were analysed. Difference in clinical, radiological presentation, sputum conversion along with mortality and morbidity were analysed in these patients. Among drug addicts all were males. 80% were young adults between 15-44 years. 60% were addicted to one drug while rest to more than one drug. Major addiction was diamorphine (Heroin) and Charas. Clinical presentation was common in both groups. Majority of patients presented with cough, expectoration and dysponea.

Radiological presentation was bilateral, extensive and atypical in drug addicts. It look eighty days for sputum conversion as compared to non drug addicts where sputum converted in thirty five days. Majority of the patients left the hospital without advise. Mortality was high in drug addict group. Proper and detailed drug addiction history, therefore, becomes necessary if there has been any report of drug abuse in patients coming with signs and symptoms of pulmonary tuberculosis.

BERCULOSUS MENINGITIS, A REVIEW OF CASES ADMITTED IN GULAB DEVI CHEST HOSPITAL LAHORE.

Shabbir Raza, Muhammad Ihsan Khan
Gulab Devi Chest Hospital, Ferozepur Road, Lahore.

alysis of 159 cases of Tuberculosus Meningitis admitted in Devi Chest Hospital, Lahore, during last two years was Age incidence, clinical presentation, complication of the e and Tuberculous involvement of other organs was noted. fort was made to establish the criteria for diagnosis. The a set for diagnosis was any three positive findings of the ving:

nical onset consistent with Tuberculous Meningitis.
chemical changes in C.S.F. suggestive of Tuberculous igitis.
tology of C.S.F. suggestive of Tuberculosis Meningitis.
S.F. smear positive for AFB.
S.F. culture positive for AFB.
tection of Tuberculostearic acid C.S.F.
sence of IgG Anti-bodies.
T.Scan of brain suggestive of Tuberculsous Meningitis.
ndoscopy.

culous Meningitis was most commonly found to be ated with Miliary Tuberculosis and pulmonary culosis. One patient of Tuberculous Lymphadenitis oped Tuberculous Meningitis while on anti-tuberculous

INTERMITTENT THREE TIMES A WEEK D.O.T.S. (DIRECTLY OBSERVED TREATMENT SHORT COURSE) A PRELIMINARY REPORT.

DR. SHAHINA QAYYUM

A study is being conducted at OJHA institute of chest disease Karachi to see the effect of D.O.T.S. when given three times a week.

This study include pulmonary sputum positive patients who are placed in either catagory-I or catagory-2.

Results in terms of sputum conversion at the end of intensive phase, patients compliance and cost effectiveness are encouraging and will be presented.

KEY WORDS: INTERMITTENT D.O.T.S.

TUBERCULOSUS MENINGITIS IN CHILDREN

Sheikh G.A.
Children's Hospital &
Institute of Chid Health, Lahore.

uberculosis is a common disease in Pakistani children, so is the iberculosis meningitis. This is a retro spective study of 40 .B.M cases admitted at Services Hospital and Mayo Hospital ahore from 1985-1995. The presenting symptoms, physical xaminations were reviewed, as well as diagnostic criteria and eatment. The management of these cases was checked and the esponse to therapy was examined.

ecommendations are made for the deficiencies present and for ie improvement in future.

EMPYEMA THORACIS CONSERVATIVE MANAGEMENT BY CLOSED TUBE THORACOSTOMY

BY
Dr. Sultan Ahmed Abdullah, Dr. M. Sadiq,
Dr. Munawar, Department of Chest Diseases,
Punjab Medical College, Faisalabad.

Twenty-Two patients, 13(59.1%) males and 9 (40.9%) Females forming 3.5% of total consecutive admissions in the department of Chest Diseases Divisional Head Quarter Hospital, Faisalabad during the period 01.01.95 to 31.12.95 were treated by closed tube thoracostomy, Pathogenic Diagnosis was presumptive in the absence of adequate Laboratory help. Treatment failures are attributed to in-adequate investigational facilities and lack of timely surgical help/advice. Overall cure rate was 55.5% 61.5% among males and 44.4% among females (Table-5)

WHO IS AT RISK OF TUBERCULOSIS

Dr. Sultana Habibullah, Dr. Nadeem Rizvi,
Dr. Sultan Farooqui, Mr. Ishtiaq Ahmed,
JPMC, Karachi.

CTIVE:

al: To determine the difference in demographic teristics of Tuberculosis and non Tuberculosus persons.

ic: To determine the risk of disease among cases to among ls, To identify other factors including medical problems diction in the causation of disease.

ial and Methods: This is hospital based matched case l study done in JPMC, Karachi, a tertiary care hospital, on dividuals with case to control ratio of 1:1. age, sex and economics status were taken as matching factors: The study that disease was more in females 238 (27%) in age group years 120 (13.6%) and in class II Socio-economic group 34.2%). The study also shows that risk was m ore in d, illiterates and addicated individuals, in those having low and in families where large n o, of people are sleeping in om with more on less no ventilation.

usion: The study conclude that poor housing condition, crowding, low socio-economic status, under nutrition high acy rate and addiction are risk factors for the causation of culosis. In a developing country like Pakistan solution of problems will not be very easy. So in our opinion the most ve way to control the epidemic of TB is to start screening h risk group.

words: Tuberculosis and demographic characteristics,

"PERMANENT CURE OF TUBERCULOSIS UNDER UNANI SYSTEM OF MEDICINE - A REPORT"

Dr. S. A. Rasheed,
Founder Director,
Indo Unani Medical Research Specialist Centre
Mysore 570 002, INDIA

Unani system of medicine, as on records, have evidence to show Anti Tubercular activity to permanently cure Tuberculosis. Several hundreds of T.B. patients are treated on O.P.D. basis administering oral medicine, which is developed by R & D, indigenously using herbal, mineral/calcium ingredients for a period of 4 to 6 weeks.

99% of the sputum positive patients turned to be sputum negative in this period without any side effects or toxicity during the course of treatment. The basis of diagnosis and cure is assessed by sputum examination and Chest X-Ray. Patients are monitored personally every week at the above Medical Research Centre.

Medicines are cheap, easy for administering, without any side effects and toxicity and complete relief and cure from Tuberculosis.

'ER-CUTANEOUS NEEDLE ASPIRATION PSY (PCNAB) IN PULMONARY NEOPLASM A REVIEW OF 54 CASES

Syed Khurshid-uz-Zaman

Gulab Devi Chest Hospital Lahore

rier performed first successful Per-Cutaneous Needle tion Biopsy (PCNAB) for Pulmonary Neoplasms in 1886, ue to large size of needles used and higher rate of ications the procedure fell into disfavour. Now the lure has been revived by many, taking advantage of better ıg techniques.

erformed successful Per-cutaneous Needle Aspiration ' (PCNAB) on 54 cases, where lesion was peripheral and optic Bronchoscopy was not rewarding. Our diagnostic vas 83% and rate of complication was 3.7% out of 5 cases ınd 19 (35.18%) cases of Sq. Cell Ca, 16 (24.62%) cases enocarcinoma, 9 (16.66%) each of Large Cell Carcinoma on-Hodgkin Lymphoma, 1 (1.85%) case of Hodgkin and 3 ć) cases of Metastases from kidney, thyroid and muscles.

ink that PCNAB in selected cases is a wonderful technique ould be used more often.

TUBERCULOSIS : AN AUTOPSY STUDY OF 100 CASES

Tariq Mahmood Tahir, Naseer Ahmad Chaudrhy, Saeed Akhtar Khan, Shamshad Rasul Awan.

An AUTOPSY study was carried out a PGMI, Lahore in 100 cases for pneumoconioses. People dying under un-natural circumstances who underwent post-mortem examination were studied over a period from June 1995 to January 1996 at Forensic Medicine Department of King Edward Medical College, Among the 100 autopsy cases, twenty showed tuberculosis. Sixty five percent of the cases were in 30-49 years age group, showing a male preponderance (75.0%). Significantly greater ($p=0.02$) number of cases (14) occurred in areas with moderate to maximum air pollution. In 18 (90.0%) cases, tubercle bacilli were detected on fluorescent (Auramine-Rhodamine) staining of specimens.

Such a high prevalence of tuberculosis found incidentally demands an urgent epidemiological survey for tuberculosis. There is also a storage need to overcome this problem through an integrated tuberculosis control program at provincial and central levels in the country in which all the medical institutions and NGO's should also be involved.

TUDY ON TYPING IN 247 PATIENTS WITH LUNG CENCER

Thi Kieu Dung. The National Institute of Tuberculosis and Respiratory Diseases (NITRD), Hanoi, Vietnam.

determination of incidence of patho-histological type is ɔrtant for improving the treatment strategy within the ıework of the national project of prevent and against lung er.

ng a time from November 1996 to November 1997, 247 ıts with lung cancer had operated in NITRD: 88% were in , 12% in female. The ratio of patho-histological was wing: Epidermoid carcinoma: 41.3%; Adenocarcinoma: % Large cell carcinoma: 17%; Combined type 9% (there are ɔr more types in a tumour).

e was the change of the incidence of types when we ɔared current data with ones on the period from 1990 to . The change trends towards the increase epidermoid noma and decrease of adenocarcinoma in both sexes: male 'emale.

PRESENTATION OF LUNG CANCER

Zafar Hussain Iqbal
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K. E. Medical College and Mayo Hospital, Lahore - Pakistan.

This study has analysed 260 cases of lung cancer diagnosed by fibreoptic bronchoscopic biopsies, brushings or washings at the department of Chest Medicine, Nishter Hospital, Multan during the period 1991 to 1995. Squomous cell carcinoma was the commonest type (53.8%) followed by small cell carcinoma (10.3%), large cell carcinoma (8%) and adenocarcinoma (53%). In 22.3% cases histology was positive for malignancy. Male to female ratio was approximately 7.6 : 1. Majority (62.6%) of the patients were in the age group of 51-70 years. Overall 86.1 cases were smokers and 13.9% nm smokers. Main respiratory symptoms were cough (73%), breathlessness (43.8%), haemoptysis haemoptysis (33.4%) and chest pain (32.3%). Non-specific symptoms were fever (25.7%) anorexia / weight loss (27%) and clubbing (28%) Commonest intrathoracic metastatic manifestation was hoarseness (21.5%) whereas extrathoracic was cervical lymphadenopathy (15%). Chest radiographic abnormalities were hilar mass (37.6%), peripheral mass (27.3%), pleural effusion (15.3%), collapse (14.6%), consolidation (12.6%), cavitation (3.4%) and raised hemidiaphragm (3.4%).

ALLERGIC BRONCHOPULMONARY SPERGILLOSIS AND BRONCHIAL ASTHMA

Zafar Hussain Iqbal, Nadeem Anwar
stitute of Chest Medicine, K.E. Medical College & Mayo Hospital, Lahore-Pakistan.

cases of Allergic Bronchopulmonary Aspergillosis (ABPA) included in this study. Among these 90% were asthmatics between 11-40 years of age. Chest Radiographic rmalities included consolidation (67%) infiltrate (65%), hiectasis (23%) fibrosis / collapse (27%) involving all . In 92% cases these changes were fleeting in nature. On asis of abnormal chest radiograph and suspicious symptoms of cases were misdiagnosed and treated as Pulmonary rculosis (P.T.B.) by general practitioners of previous cians. On investigations we found that all 40 cases had l (>0.5 x $10^{=9}$ per liter) absolute eosinophil count in heral blood. Sputum eosinophilia was detected in 77% cases fungal hyphae from sputum were isolated in 47% cases. choscopy and total serum IgE levels were also abnormal but rmed in only 25% cases. Majority of the cases were treated oral prednisolone 40 mg daily for 4-6 weeks showing rkable clinical improvement which was confirmed by logical clearance and fall in absolute eosionphil count. One h cases (25%) had relapse between 6-12 months. This study ated that diagnosis of ABPA must be considered in asthmatic nts having un-explained, fleeting or persistent chest graphic shadows.

Winning the war against TB.

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Rifampicin 150 mg

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