

STAPH. PNEUMONIA QUARTET.

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Introduction

This is a report on 4 cases of pneumonia seen at Bir Hospital, Kathmandu over a 2 month period during February and March 1969 ie. Magh 15th, to Chaitra 15th, 2025. It is rather unusual that 4 cases having the same aetiology should have presented within so short a period and that they should typify the manner of presentation, progression and the complication of staphylococcal pneumonia in general.

Method and Material.

All the patients were assessed on admission and during their stay in hospital. A short account of each patient is given below.

CASE No. 1 Kanti, 5 years, female.

This child was first seen at home on 10th Magh with a seven day history of fever. This fever itself had been preceded by a fall two days earlier. When seen she had pyrexia and a rapid pulse rate. There was dullness on the left side of her chest and fine crepitations on auscultation. She was started initially on sulphas and penicillin but the temperature continued to fluctuate. In view of this an X-ray of the chest was taken and this showed cystic areas with fluid levels—suggesting staphylococcal pneumonia. A throat swab taken on 16th Magh showed no organisms on direct film and on culture. Following the X-ray, the sulphas were stopped and she was put on a combination of oxytetracycline and oleandomycin. The response was not very remarkable for she still continued to have wide variations in her daily temperature. She was re X-rayed on the 18th Magh and this again showed irregular, cystic areas devoid of lung markings with apparent fluid levels in the left side. This is the X-ray shown as No. 1. Advice for hospitalisation was not accepted. Only later, on 25th Magh was she admitted for aspiration. Clinical findings at the time of admission were: Pulse rate of 110/min. with a temperature of 100.7°F. There was dullness and poor expansion on the left side. The pre-aspiration X-ray showed a left sided pleural effusion with multiple loculations containing air and thus suggesting a broncho-pleural communication. Leucocyte count was in the order of 15,400 with 56% Polymorphs, 41% Lymphocytes and 4% of Eosinophiles.

She was aspirated on 26th Magh and 30ccs of green coloured pus, which grew coagulase positive staph sensitive to tetracyclines, streptomycin and chloramphenicol. Subsequent aspiration four days later resulted in 7ccs of pus which again grew Coagulase positive

staphylococci sensitive to the above mentioned antibiotics. Her temperature now settled on broad-spectrum antibiotics to 99.7° F but because of persisting dullness on the left side a further attempt at aspiration was made, resulting in only 50cc of pus. A result of the heavy antibiotic therapy was that a throat swab taken on 1st Falgun grew *Candida albicans*.

In view of these poor results on aspiration, she was referred for surgical operation. A further week of therapy with broad-spectrum antibiotics however resulted in a fairly good lung expansion. X-ray prior to discharge from hospital showed only pleural reaction and fibrosis.

CASE No. 2. Udaya Ram, 5 years, male.

First attended Children's O. P. D. on 6th Poush with a month's history of burn on the left foot. Had been given penicillin injection one week previously and came out in a rash and urticaria.

On examination he had a mild maculopapular rash on the body, and a swollen left foot. He was given tetracyclines. The following day however he was rushed to the Emergency Dept. as he was restless and irritable. The erythematous, discrete macules were present on the abdomen; neck rigidity was present. He had a temperature of 100° F and his pulse was 120/min. Dullness was present on the left side. He was put on sulphas, streptomycin and given paraldehyde as sedation.

Investigations at the time of admission included a white cell count which showed a total count of 8,700/cu mm with 72% Poly. and 28% Lymphos. C. S. F. examination was normal and stool showed ascariasis and hookworm infestation. X-ray on 11th Poush was reported as:— "There is a large translucency in the lower 2/3rds of the left lung field which appears to be a large cavity in the left lower lobe, possibly Pneumatocoel. There is some fluid in the left pleural cavity as well. The pneumatocoel could be due to staphylococcal pneumonia. A thin line in the right lung field suggests shallow pneumothorax." This is shown in X-ray No. 2

In hospital his temperature continued to fluctuate so he was subsequently started on a course of chloramphenicol and later oxytetracyclines. Sputum done on 15/9/025 showed no organisms. He was referred to the surgeons for his chest condition and also for an abscess in the left gluteal region, which was incised.

Aspiration of the left pleural cavity resulted in 275cc of pus which showed Gram +ve cocci on direct smear and coagulase -ve cocci on culture. Second aspiration on 2/10/025 resulted in 450 ccs of pus. His temperature then started to settle but then he developed another abscess in the left gluteal region which also had to be incised. This was followed by a supra-pubic abscess which was treated surgically. By now his lungs showed good expansion and on full recovery he was discharged from hospital.

CASE No. 3 Dhruba, 8 years, male.

This boy was admitted into Bir Hospital on 7/10/025 with a one month history of cough

and fever. He had breathlessness for two weeks. He was very dyspnoeic on admission, with a pulse rate of 124 per minute and a temperature of 104°F. There was marked dullness on the left side of his chest wall. X-ray showed this to be due to a very large effusion.

Aspiration that very day resulted in 1200 ccs of pus. Further aspirations of 700 and 690 ccs were done in the next 3 days. A week later 600ccs and 2 weeks later 140ccs were obtained. On culture of all these specimens no pathogenic organisms were reported.

In view of this recurring empyema he was transferred to the surgical department and a rib resection done on 14/11/025. At the time of writing his condition is satisfactory and he is due to be discharged home.

CASE No. 4. Purna Luxmi, 9 years, female.

This girl was admitted on 5/11/025 with a history of a fall 4 month previously. This had been followed by a low grade fever, dry cough and loss of appetite. On examination the child was dyspnoeic with a pulse rate of 112 and respiratory rate of 72 per minute. Apex beat was shifted towards the left as was the trachea. Stony dullness was present on the right side. She was thought to be a case of tuberculous effusion and admitted to hospital.

Investigations at the time of admission included a white cell count of 12,650 with 55% polymorphs and 43% lymphocytes. E.S.R. was 62mm in the 1st hour. Stool showed *E. histolytica* and *G. lamblia*.

She was started on penicillin and streptomycin initially as the aspiration done had resulted in thick pussy material which grew coagulase positive staphs. resistant to penicillin and streptomycin and sensitive to tetracyclines and chloramphenicol. A total of 3 aspirations on her resulted in 910ccs of pus. She was first put on chloramphenicol and later tetracyclines. Her temperature has now settled and she is now doing well.

DISCUSSION.

In Western countries it is more usual to see staphylococcal pneumonia in the newborn in hospital. It is usually the staphylococcus which is resistant to most antibiotics that causes a specially severe infection, leading ultimately, if not adequately and properly treated, to death. The usual mode of onset is an upper respiratory tract infection which leads on to the rapidly progressing pneumonia.

In this group of four patients it will be noted that case No. 1 had a history of fall just prior to admission, No. 2 had a septic focus on the foot and case No. 4 had a history of previous fall 4 months previously followed by chronic ill-health. It is possible therefore that the wound caused by the fall became infected and acted as a septic focus for subsequent lung infection. The third case in which no obvious cause for the pneumonia was found probably gives the reason for seeing these four cases of staphylococcal infection.

Kathmandu and parts of Nepal have since January 1969 been having an epidemic of Hong Kong influenza. The presentation of this has varied from mild fever with severe body

aches and malaise to cases which present with fever upto 104-105°F. or with a severe pneumonia. Now it is known that staphylococcal pneumonia features as a secondary invasion of the lung in influenza epidemics.

The cases reported show the complications of staphylococcal pneumonia viz. multiple lung abscesses which may erode through the pleura and form empyema, pneumatoceol or pneumothorax. Abscesses in other organs, as occurred in case no. 2 is also a possibility.

SUMMARY.

A report of four cases of staphylococcal lung infection which occurred over a period during which an epidemic of Hong Kong influenza in Kathmandu is reported. It is suggested that the staphylococcus was a secondary invader in this initial viral infection.

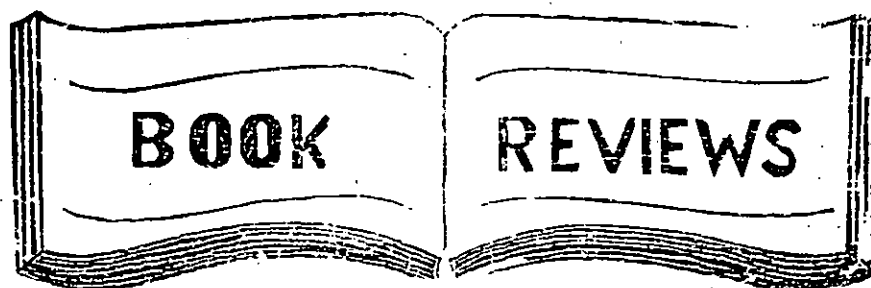
ACKNOWLEDGEMENTS.

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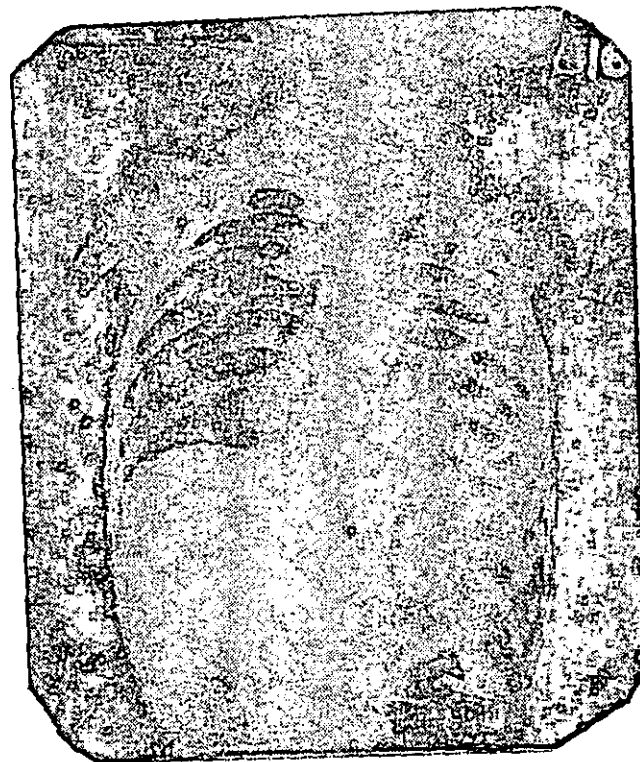
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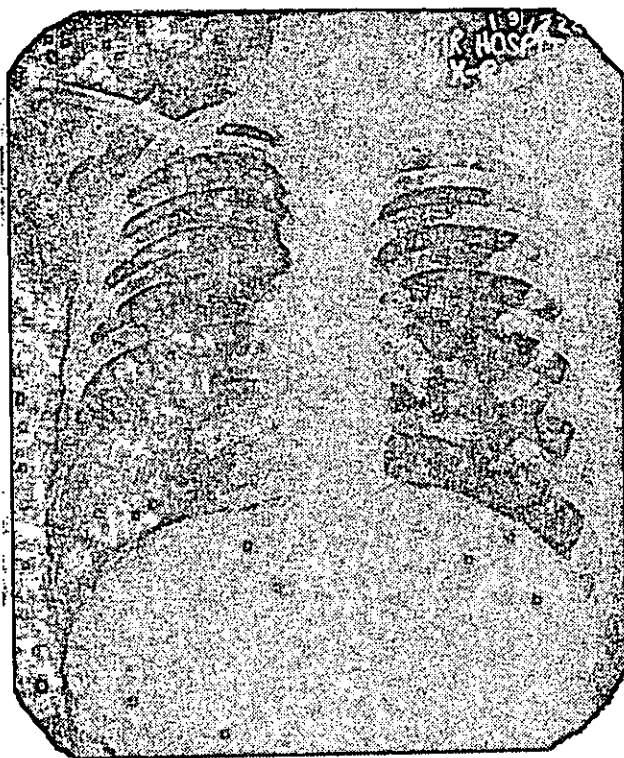
OF MEDICAL BOOKS (BOTH ENGLISH & NEPALI)



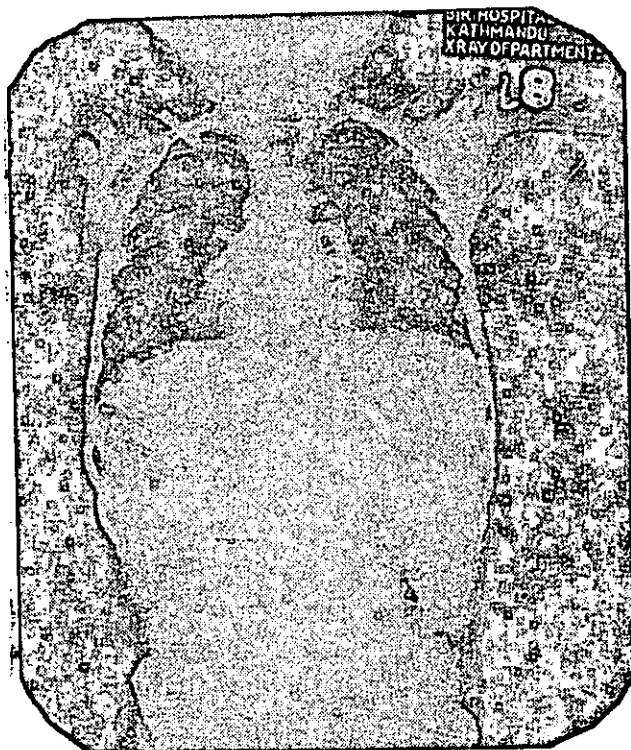
X-ray No. 1



X-ray No. 2



X-ray A
(Dinesh)



X-ray B
(Raju)