

PNEUMONIA

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The Silent Sudden Killer

By Dr. Julius Ogeng'o

It was a long time since I had last travelled upcountry by the night bus, but this time I did not have a choice. My parents were celebrating their fortieth anniversary in marriage, and doubling it with a house warming party. My father had insisted that being his first son, I must be present, and with family. My wife always feared for the children's health every time I mentioned a trip home.

The seats we booked were next to a window which did not close properly, and as the old bus rattled along, I could feel the cold wind penetrating my garments into to my bones. What of the young ones? Sleeping was difficult and the discomfort was unbearable. The two ceremonies went on well, and our return journey, this time during the day, was pleasant.

For the first three days, all appeared well and Susan, my seven year-old daughter went on with school as usual. But when my secretary interrupted an important meeting which I was chairing that afternoon to tell me about a call from my house, my heart skipped a beat. There must be something wrong I thought. "Susan has been brought home by one of the school teachers. She has a running nose, a high temperature and laboured breathing," our house help summarized.

When I got home that evening, poor Susan was restless in bed. I got her up, and asked Dr. Tula, the family doctor who had accompanied me to take a look at her. As part of the history, I filled him in on this uncomfortable night trip we had taken a few days back. "Straight forward 'cold', but the fever suggests malaria, as well. I will cover her for an upper airways infection and malaria. I expect her to get well by morning," the doctor assured.

Usually, I don't please in combining my paternal role with my profession - I simply hate to be daddy and doctor to the same child. So, I accepted Dr. Tula's prescription without question.

By the time we were retiring to bed, the little girl appeared better, and indeed was sound asleep, but at about 4.00 a.m, I smelt a rat!

Shortly after taking the drug, Susan did not improve except transiently. Although her temperature appeared stable, and her nose stopped running, on the second day, she started coughing and the difficulty in breathing worsened. With every episode of cough, she would complain of chest pain, worse on the left side where she also experienced pain on breathing in. She lost her appetite and by the third day, she was quite frail. Although it was at night, I decided we would not wait any longer.

At the hospital, the night doctor was quick to diagnose pneumonia. After three days of hospital stay, Susan was discharged but could not resume school for another three days.

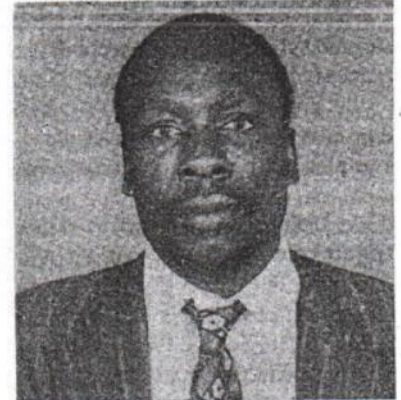
Pneumonia, defined as inflammation of the lungs, is a fairly common problem in the developing countries, including Kenya. It is a frequent cause of ill-health, and death, especially among the elderly and new born babies. The categories which are most vulnerable include the following:

Infants, especially neonates who either were born prematurely; or are small for age; are malnourished; have some congenital abnormality of the heart (or blood vessels), respiration system, chest wall, digestive system, abdomen or brain; or older children who suffer measles; are not kept warm and dry or are forced to drink by blocking the nostrils.

Old people with one or more of the following difficulties: a debilitating illness that makes them bedridden such as fractures, brain injury or disease; malignancy, uncontrolled diabetes mellitus, heart disease, kidney disease; malnutrition etc.

Young adults who are bedridden for any reason, or have another illness that weakens their immunity. Paralysis, diabetes, malignancy are a few among such illnesses. Currently, and more importantly HIV infection. Indeed, persistent or recurrent pneumonia may be the AIDS defining illness.

Drunkards who after ingesting massive amounts of alcohol may miss the way and/or the energy to make it home and spend the chilly night by the roadside. Such people may vomit, then



Dr. Ogeng'o: "Not all pneumonia causes cough; and not all coughs are due to pneumonia."

breath in (aspirate) their own vomitus; or insects and dirty water may find their way into airways with deleterious effects.

Chronic smokers, in whom some air ways are blocked by the tar, and mucus drainage of the airways compromised by the irritation.

There are several types of pneumonia. These include aspiration pneumonia, in which some material, usually vomitus is inhaled into the lungs. This type is common in unconscious patients due to whatever cause, and in children, especially the neonates.

Secondly, there is chemical pneumonia, which follows ingestion of some corrosive material. It is a common complication of paraffin poisoning.

Thirdly, and most importantly, is the ineffective pneumonia, which is due to some infective microbevirus, bacteria, protozoa, parasite or fungi.

In this article, I shall concentrate on this last group as it is the most common and also the one that often complicates the other types of pneumonia. This type of pneumonia is described as bronchopneumonia if it is generalized, or lobar pneumonia if it's confined to only a part of the lung. Either type can also be classified as chronic, or acute, depending on the duration and/or the causative agents.

Usually, but not always, pneumonia follows some "flu"-like illness, with a running nose and/or usually a cough suggestive of some upper airway infec-

tion. A sore throat, due for example, to tonsillitis may also precede pneumonia. Commonly, there is a history of exposure to some chilling atmosphere; travel over a long distance in a fast moving vehicle with open windows; being rained on, or exposure to dust or another airway irritant. In infants, failure to cover them, prolonged stay in wet linen, especially in a chilly atmosphere may be predisposing factors. The presentation varies with age.

In infants and young children, cough; high temperature (fever), difficulty in breathing are the commonest features. As the difficulty in breathing worsens, there is grunting; flaring of the nostrils, a marked increase in the breathing rate; in drawing of the intercostal spaces; and overuse of the muscles surrounding the abdomen and the neck. The heart rate increases, and this is an important sign, as parents should note that children with diarrhoea and vomiting, need not have the problem in the alimentary canal.

Because of the fever, rapid rate of breathing, the diarrhoea and vomiting, infants with pneumonia frequently get dehydrated, and may present with signs and symptoms of dehydration. The babies are weak, have no appetite, are irritable, cry easily, and could convulse. Breathing, but more commonly attempts to cough are painful, and the baby cries with every breath or cough. The cough makes the veins of the head bulge, and the eyes turn red. Severe bouts of coughing may evoke vomiting, and the extremities may turn blue.

Cough, though frequent, is not always present in pneumonia. Not all pneumonias cause cough; and not all coughs are due to pneumonia. Other causes of cough, that could make the child look equally helpless include throat infections, asthmatic attacks, allergies, malaria, meningitis, inhalation of irritant gases, foreign bodies, trauma to the chest wall and/or the respiratory system; intestinal worms; and congenital anomalies of the alimentary canal, brain and spinal cord, heart and blood vessels; thoracic wall and airways; drugs and other forms of poisoning, among others.

Among adults and older children, frequent complaints are fever, cough, chest pains, worse on coughing and breathing in; and difficulty in breathing. The cough progressively gets worse, is productive, with yellowish sputum,

which may be blood stained. Initially the cough may be dry, with very scanty sputum. The cough may be violent, and accompanied by vomiting. There are general body aches, weakness, reduced interest in the environment, irritability and loss of appetite.

On examination, the nostrils also flare, the rate of breathing is rapid and the temperature is high. Again coughing is not a must. There are myriad other conditions that may resemble pneumonia. These include tuberculosis, bronchitis and bronchiectasis; upper respiratory tract infections and throat infections; heart failure; tumors (malignant and benign), foreign body inhalation, asthma, parasitic infestations, chest and abdominal trauma etc.

Usually, pneumonia in both children and adults can be distinguished from the other causes of coughing by the history of the disease, which is usually acute but could well be chronic.

The complaints are usually suggestive. When examining, the doctor finds an ill patient with features described above. Besides, there is decreased air entry into the affected lung, and fine crackling sounds called crepitations may be heard over the lung area using a stethoscope.

I must however point out that those sounds are not always present, and the

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stethoscope's use is not mandatory. To confirm the diagnosis, and exclude other diseases, the doctor may request for a chest X-ray, and a number of blood tests. Microscopic examination, as well as culture and sensitivity studies of the spectrum may yield relevant diagnostic and treatment results, and many doctors now do this as a routine.

Sometimes also, the doctor may ask for tests of the heart, liver and kidney function, or even CT scans of the chest, abdomen or brain. Usually it should be left to the attending doctor to rationally select his tests as he deems them relevant and appropriate.

The treatment of simple pneumonia is usually not difficult. It depends however, on the severity of the patient. Some of the general treatment measures include keeping the patient warm; plenty of fresh air; plenty of balanced diet; and general tranquility.

Specific treatment usually entails an appropriate antibiotic combined with anti-fever/anti-inflammatory drugs.

These can be administered through the mouth if the patient is not vomiting and is not too unwell to swallow; or by injection if the patient is too ill to swallow or is vomiting. Very ill patients may be kept in the intensive care unit (ICU) on breathing machines and I-V drips.

Personally, I discourage the use of anti-cough syrups especially for adults, as they give a false impression of well being. However, when the cough is disturbing, and especially in children, anti-cough syrups may be given but on condition that the complete course of antibiotics continues to be given faithfully.

Resistant pneumonias exist. The pneumonias associated with AIDS, caused by some typical microbes, may be particularly troublesome to treat. But, usually good combinations of antibiotics, on doctors' prescription, will cure most of the pneumonias.

Recurrent and/or untreatable pneumonia, if lasting beyond two weeks, should give the first clue to pulmonary tuberculosis. An underlying cause, if well searched, is always found if pneumonia fails to respond to conventional therapy.

Untreated pneumonia can resolve on its own with complete lung recovery; or program to the chronic phase; or worsen to cause respiratory failure and eventual death.

Pneumonia can lead to fluid accumulation in the cavity between the lungs and the chest wall (the pleural cavity) and further worsen the outcome, by contributing to jeopardize breathing.

The other causes of respiratory failure include severe burns, head injury, lung trauma, drowning, inhalation of corrosive chemicals; overwhelming infection, diabetic complications, kidney failure, clots in the lung, heart failure; and blood clotting abnormalities, among others. These must always be born in mind, as their specific management is different from that of pneumonia.

In conclusion, pneumonia is in the broad category of lung diseases, which is easy to suspect and consult your doctor before it gets complicated. General improved hygiene, good sanitation, avoidance of overcrowding and proper aeration of our residences, combined with a whole balanced diet, are useful preventive measures. Beware of cold weather, and avoid exposure of small babies. Whenever your pneumonia does not respond to conventional treatment, see your doctor again - There could be a deeper underlying cause, and TB is possible!