

Whooping cough. Doctor to doctor.

Summary

Whooping cough is best recognised by hearing or seeing a whooping cough paroxysm. I therefore recommend that possible sufferers record a paroxysmal episode and show it to their doctor. Seeing/hearing is believing! I hope you will forgive my impertinence.

Quick Facts

It is more common in adults than children.

Only about half of patients with whooping cough "Whoop".

It is only a serious illness for infants.

Immunization benefit may only last 10 years or less.

Most cases go unrecognised because the patient looks well, there are no physical signs and you never hear them cough.

Most labs can now do simple blood test. Ask for "pertussis antibodies" at least 2 weeks into the illness.

In the UK since Jan 2013 Oral fluid testing can be done on 8 to 16 years olds. Ask HPA or your local lab.

It is a notifiable disease and therefore doctors are obliged to report suspected cases.

The main characteristic of whooping cough is attacks of violent, uncontrollable coughing followed by long periods without coughing, lasting several weeks (average is 14 paroxysms a day).

Dear Doctor,

If your patient gives you this, it is as a result of my advice to do so. Please indulge me and your patient by giving it some consideration. www.whoopingcough.net exists to help patients with it to get diagnosed by their own doctor.

Whooping cough **AS IT REALLY IS** in the developed world today.

It is not like the traditional descriptions that you read about in most textbooks, or how you have learnt it. Text book descriptions have been copied from each other down the years. They do not describe pertussis infection as it usually presents nowadays.

Who am I

My name is Doug Jenkinson. I am a retired family doctor in Nottingham, England. I have made a special study of whooping cough in the community in which I work (11,000 patients) over the last 40 years. I have meticulously studied every case of whooping cough that has occurred in this time (over 700), and built up a good working knowledge of the disease as it affects individuals. I have published extensively on the subject. (most relevantly 'Natural course of 500 consecutive cases of whooping cough: a general practice population study. Jenkinson D. Br Med J 1995;310,299-302.')

Why most cases are missed

The issue with whooping cough is the extreme difficulty of making a diagnosis. There is little doubt that most cases go undiagnosed by doctors. Some of these patients find the diagnosis for themselves with the aid of a site like this, but then usually have the diagnosis rejected by their doctor.

There are four difficulties and misconceptions

1. Most doctors are not familiar with the unique character of the sound of a whooping cough paroxysm because they have never heard one or had the opportunity to hear one.
2. Doctors falsely believe that whooping cough is a severe and serious illness causing frequent coughing and that they could not possibly miss such a diagnosis if their patient had it. This only true in infants. In fact, most patients feel and look perfectly well with whooping cough and usually go for many hours at a time between paroxysms. So you are most unlikely to hear a patient with whooping cough who coughs at all. And we are all so used to patients exaggerating the severity of their symptoms, that a patient with whooping cough describing their cough accurately sounds just like a patient with an ordinary cough using a bit of poetic license!

3. Doctors think it is rare. It is far more common than we think. Because it is unrecognized, few cases are officially notified. This reinforces the idea of rarity. Research from several different sources confirms that it is roughly 30 to 100 times more common than recognized. This perception is changing, and with the advent of simple blood tests, more cases are being recognised. This gives the impression that whooping cough is increasing.

4. Doctors think it has been immunized out of existence. The effect of immunization only lasts a few years. Adolescents and adults become vulnerable once again. Adults can now get it and pass it to their children.

How do you recognise it. You need to know that when it occurs it often is in small outbreaks in a school or church community, but also frequently affects individuals or within a single family without an obvious source of infection. You should find several cases. Such clusters are strongly in favour of pertussis as the cause.

Outbreaks tend to occur every 4 to 5 years.

History of infrequent choking cough is the most important factor in diagnosis. Most patients, or parents of children with whooping cough do not give a history spontaneously that allows the diagnosis to be made. That is why a high index of suspicion is the first requirement. However, when it occurs in clusters, some will give a classical history if you can recognize it. So when you have found your first case you can assume there are others about and start asking the right questions. The symptoms you are looking for that make it whooping cough are as follows.

It can start in one of two ways generally. The most common is a very sore throat, slight malaise and sometimes a mild feverishness that after 3 or 4 days turns into an unremarkable dry cough and after 10 days from the very start of symptoms starts to become paroxysmal (uncontrollable and violent). In the third week and for the next 4 to 24 weeks the cough is almost exclusively paroxysmal. Thus, after 2 weeks from the start of the illness the diagnosis is made from the existence of paroxysms of coughing that continue for at least 2 weeks. A typical paroxysm comes unexpectedly (but may be precipitated by a change in temperature, or peculiar things such as a particular food). It is a succession of dryish coughs that follow each other without any inspiration so that the lungs become empty of air and the patient develops severe facial congestion. There sometimes follows a brief period of a feeling of suffocation, and cyanosis may occur. Then, sometimes, (about 50% of patients) will occasionally, when inspiration suddenly comes back with a rush, make an inspiratory stridulous 'whoop'. The paroxysm may be repeated several times leaving the patient exhausted. There then follows a long period before the next paroxysm.

Children tend to have about 10 paroxysms a day at their worst, but adults will commonly have only have 2 or 3 a day. It usually causes onlookers as much distress as the patient! (another useful history point). Paroxysms are commonly associated with coughing up sticky mucus and reflex copious salivation. Most patients will retch after a paroxysm as a matter of course. About 50% vomit at some time.

It can also start with coryzal upper respiratory symptoms and a moist cough before it turns into the typical paroxysms. This is, in fact, the usual textbook description, which in my experience only occurs in about a third.

There are usually no abnormal physical signs. Sometimes there are added sounds in the chest. Sometimes a few wheezes, particularly if the patient has asthma. Usually asthmatics have a reduction in their level of wheeze when they get whooping cough. Sometimes there are a few crackles. None of these adventitious sounds or their absence are a help in diagnosing whooping cough but they obviously raise differential diagnoses that will inevitably be difficult to verify if it is whooping cough. Sometimes there is secondary bacterial infection which might give some signs. There may concomitant respiratory infections to confuse the picture in whooping cough (the history will stand a chance of sorting it).

If you diagnose all the cases of whooping cough that occur, the average duration from start to finish is about six weeks in children. It is usually longer in adults. If you only diagnose the more severe cases the duration is more likely to be 3 months. With all grades in between of course.

Laboratory tests

Proof of whooping cough has been difficult but is getting easier. A positive per nasal swab is wonderful when it happens but by the time most cases are recognized the bugs have gone, and few doctors keep these special pernasal swabs. PCR testing is a better test on nasopharyngeal aspirate if your lab can do it. Serology is done differently in different parts of the world, and some

tests are unreliable. In some places, United Kingdom for example, NHS labs can measure anti pertussis toxin IgG on a single sample of blood at least 2 weeks into the illness. Just send a blood sample requesting 'pertussis antibodies'. Also in the UK, labs can do the same test on oral fluid, but only for 8 to 16 year olds .

What about treatment

There isn't any really. Sick infants need hospitalization for assessment quite often, and if severe may benefit from antibiotics and oxygen. Others generally just need erythromycin or azithromycin to kill Bordetella organisms to stop infectivity. If the same is given during incubation the disease may be aborted. Management involves checking for complications such as pneumonia and supporting the parents of children in their coping with what is an exhausting experience for all the family. Pernasal swabs or blood specimens may be tested according to the advice of your laboratory. Negative tests do not always exclude whooping cough as a diagnosis. The key is the sound, which is characteristic. You can hear recordings on this site.

Any doctor in the United Kingdom who wishes to phone me for advice or more information can get me on 0115 9830235.

www.whoopingcough.net