A Study of Tonsillitis in Childhood

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Acute tonsillitis is one of the commonest infections of childhood. The infection itself responds readily to Penicillin Therapy as it is often caused by a Penicillin sensitive Streptococcus; but very often the infection is either missed or not treated properly and serious complications, namely acute glomerulonephritis and acute rheumatic fever, can occur.

It is difficult to miss the diagnosis in a child over 6 who presents with sore throat, difficulty in swallowing and pyrexia, but in younger children the infection can present in other ways and unless the throat is well examined the diagnosis may be missed.

In young infants acute tonsillitis can present with hyperpyrexia and febrile convulsions. It can present with vomiting and diarrhoea and also with anorexia and coughing. In older children the presentation might be otalgia, anorexia or pyrexia without any symptoms referred to the throat. (See Tables 1 & 2).

Table 1 shows the mode of presentation of acute tonsillitis in a personal series of 100 children aged between 6-12 seen from January 1970 to June 1971.

Sore Throat	72
Pyrexia	16
Otalgia	4
Cough	6
Anorexia	2

Table 2 shows mode of presentation in another series of 100 children aged between 4 months and 6 years in the same period.

Pyrexia	42
Fits	5
Sore throat	20
Vomiting and diarrhoea	10
Anorexia	3
Cough	20

In children who are prone to asthmatic bronchitis, shortness of breath, cough and wheezing might be the immediate sequel to acute tonsillitis and very often the presenting sympton.

In all these circumstances, unless examination of the throat is carried out, the tonsillar infection can be missed and treatment is directed to symptons such as ear drops for otalgia, salicylicates for pyrexia and bronchodilators and expectorant mixtures for wheezing and coughing.

I must therefore emphasise that examination of the throat should be the fundamental part of the examination of children. The tongue should be well depressed by a tongue depressor (several disposable ones on the market). In this way the fauces can be well scrutinised. Good light is very important for proper examination. Two practical hints are appropriate in this context — first of all, a child naturally dislikes having his throat looked at and therefore it is wise to defer it until other systems have been examined. Secondly, it is very important to have the mother holding the child properly for good examination. The best technique is to have the child sitting on the mother's lap. With one hand the mother holds both the child's arms and with the other hand on the child's forehead, she fixes his head against her chest.

Sometimes acute tonsillitis is associated with acute infection of the adenoids. The adenoids and tonsils are part of Waldeyer's ring of lymphoid tissue and they can easily be infected together. Acute adenoiditis presents with nasal discharge and obstruction. Only the adenoids might be infected and the diagnosis of acute adenoiditis should always be a positive diagnosis. It is made by means of a small mirror and a tongue depressor. The adenoids will be seen to be inflamed, with small yellow spots of pus exuding from the spaces in them.

Once the diagnosis of acute tonsillitis and/or adenoiditis is made, treatment should be started immediately with Penicillin; in young children better Intramuscularly. Treatment should last for a minimum of five days.

Although acute tonsillitis is very often caused by haemolytic streptococci there are various viruses and other bacteria which can cause the infection. Amongst the viruses, the virus of glandular fever (infective mononucleosis) is one of the known agents. Amongst other bacteria, the pneumococci, diphtheria, diphtheroids, and Vincent's Organisms are also occasionally responsible agents. However, it is very rare that one has to resort to throat swabs and antibiotic sensitivity tests. One is always safe with Penicillin.

Once treatment with Penicillin is started, the temperature subsides within 3 days. If this does not happen it is probable that a complication is brewing and complications can arise not only if acute tonsillitis is overlooked but also if Penicillin is administered in inadequate doses and over a short period.

Complications may arise as a result of direct spread of the infection such as otitis media, suppurative cervical adenitis and chest infections.

Other complications may occur in distant parts of the body after an interval varying from a few days and up to three weeks. I here include rheumatic fever, glomerulonephritis, Henoch-Schonlein's purpura and erythema nodosum. These latter complications are not caused by the streptococcus itself but by immunological reactions incited by the streptococcus. Of these immunological reactions the most serious is rheumatic fever with

its associated rheumatic carditis which very often results in chronic valvular heart disease. Kaplan & Mayeserian (1962) found that in rheumatic carditis an antigenic component of Group A streptococcus may be capable of inducing an antibody response which gives a cross reaction with heart muscle and smooth muscle.

Rheumatic fever and acute glomerulonephritis can lead to chronic illnes of the heart and kidneys respectively which in turn lead to death at an early age. Proper and prompt treatment of acute tonsillitis can prevent this.

Acute tonsillitis confers very little immunity, and it not infrequently happens that a child has several attacks in the course of a year. The infection is highly contagious and in places where children are together, as in schools or crowded homes, small epidemics are not uncommon. Some children have sore throats so frequently that, partly because of the frequent infections and partly because of several drugs administered over a long period, they lose their appetite and weight and become quite lethargic.

When the tonsils have become chronically diseased, a mild fever is often present, albuminuria might be present, and continuous swallowing of mucopus from the throat often leads to chronic gastritis. Mesenteric adenitis might follow. This is due to swelling of the mesenteric glands and might give rise to sharp attacks of abdominal pain of a colicky nature accompanied by vomiting and localised tenderness in the region of the umbilicus. These attacks closely simulate appendicitis and sometimes a laparotomy is performed which could have been prevented if a thorough examination of the throat had been carried out. Chronic infection of the trachea and bronchi are also common in such cases.

These cases of frequent tonsillitis leading to chronic tonsillitis should be treated by tonsillectomy. If the adenoids are infected as well they should be removed at the same time. Mere enlargement of the tonsils is no indication for tonsillectomy, unless they are so large that there is a gradual obstruction of the patient's breathing. Tonsillectomy by itself may make the child an easier prey to catarrhal infections, so it is not to be taken haphazardly as the patient may be worse off after the operation. Repeated tonsillitis means, of course, that the tonsils are no longer capable to resist infection. Before the operation the child's health is to be improved by correcting associated anaemia, vitamin deficiency and controlling chronic sepsis by antibiotics.

SUMMARY

In infants and young children tonsillitis may be missed unless examination of the throat is done routinely in all sick children.

Treatment with adequate does of Penicillin for a minimum of 5 days is sufficient for streptococcal sore throats. Missed diagnosis and inadequate therapy can lead to serious complications.

Frequent sore throats may lead to chronic tonsillitis resulting in debility and ill health. These cases should be treated by tonsillectomy.

REFERENCES

Kaplan, M.H. & Meyeserian M (1962) Lancet 1, 706.