PROGNOSIS IN BRONCHIECTASIS

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In 1927, we published in this journal a communication embodying the results of our experience of bronchiectasis in childhood. We then expressed doubt regarding the correctness of the view held by some authors that the condition is curable. Nobecourt, for example, in support of Hutinelle, has stated that recovery not infrequently does take place. This, he thinks, is brought about by the dilatation of the bronchi ceasing to increase, and, as the lung grows, the bronchi ultimately coming to have the normal proportions. Hutinel believed that the younger the age at which the bronchiectasis appeared the more likely was a cure to result. Thursfield and Paterson more recently have re-affirmed this favourable prognostic outlook.

So far as we could see at the time of our first analysis the condition tended to get worse. From a study of the post-mortem material it was difficult, if not impossible, to understand how recovery could take place. Many of the lungs had the naked-eye appearance of a sponge or a hydatidiform mole. Naturally, of course, the post-mortem examples would be the most severe, though it is only fair to state that in several cases death had resulted from operative interference and not in consequence of advancing pulmonary involvement. We also mentioned in support of our scepticism of a possible cure that Sir Andrew Clark and Wilson Fox remarked on the relative infrequency with which the condition was met with during adult life, a fact which these writers took to indicate that in the main life was shortened. They estimated the average duration of life after the inception of bronchiectasis at 11.8 years.

No one to-day will deny that the great difficulty in the past of deciding on the matter of prognosis in bronchiectasis was the uncertainty of diagnosis of the mischief by ordinary physical examination. As Armand Delille has stated, and we have been able to confirm, there are examples with signs but no symptoms, examples with symptoms but no signs, and examples with neither signs nor symptoms. It must be remembered also that amphoric breathing and whispered pectoriloquy, the two classical signs, may be present in the absence of any bronchiectasis. In fact, it is only with the aid of intratracheal injections of lipiodol that a definite diagnosis of bronchiectasis can be made in any individual case. Not only in this way can the presence of bronchiectasis alone be categorically affirmed but also, and this is a matter of prime importance, can the degree of bronchial dilatation be appreciated. It was on these grounds that we expressed the opinion in 1927 that 'the truth regarding the course of this disease is reserved for the future.'

Since 1924, when we first practised intra-tracheal injections of lipiodol as a routine aid to diagnosis in all cases of suspected bronchiectasis, we have kept
ARCHIVES OF DISEASE IN CHILDHOOD

in touch with all the examples recognized, and in the present communication
we wish to record our findings in the light of this special experience.

In all, we have had under observation 32 definite examples of bronchiectasis.
Of these, 12 have died, one of a coincident tuberculous meningitis and four
following operation for drainage of the lung cavities or attempted excision
of the lung. The average duration of life after the inception of the disease in
the remaining seven fatal cases was 2·63 years. Of those still alive, 14 have
been under continuous observation for periods varying between three and six
years and it is from analysis of the findings in these cases that we wish to
gain information regarding the disappearance or otherwise of a previously
existing dilatation of the bronchi. For purposes of better comparison the
children have been arranged in groups according to the length of time they
have been under observation since the date of the first lipiodol injection.

Group 1.—Children under observation between six and seven years. This
group comprises only one child whose history was recorded in our article
published in 1927.

Case 1.—A. McM., (3)*, a girl, came under observation on October 2nd 1924, at the age of
7 years on account of a persistent cough and profuse yellow sputum. She had had pneumonia
after measles when 21 months old and since then cough and spit had been present, and although
varying in severity had on the whole got worse. At times blood was present in the sputum.
She had been resident in a sanatorium at the age of 5 years because she was supposed to have
pulmonary tuberculosis.

In 1924 she was undersized with a height of 106·5 cm. and a weight of 13·4 kgm. Her
colour was good but the fingers and toes were clubbed. The Pirquet test was negative.
The cough was troublesome and came on after the least exertion, and the sputum, which seemed
to be brought up in mouthfuls, varied in a day between 2 and 5 oz. The sputum consisted of
liquid greenish pus and was devoid of all odour. The left side of the chest was flattened and
dull to percussion in the lateral region and over the back below the angle of the scapula. The
gastric crescent was on a level with the fifth rib and the heart was drawn over to the left with the
 apex in the 5th space 4½ in. to the left of the midsternum. The R.M. was tubular at the apex and
deficient at the base. After 'posturing' and the evacuation of about ½ oz. of liquid pus the
dullness at the left base was less intense, the R.M. became amphoric and pectoriloquy was
audible in the region of the angle of the scapula. X-ray examination of the chest showed a
distinct honeycomb appearance in the lower half of the left chest, and after lipiodol, an extreme
degree of saccular dilatation of the bronchi of the left lower lobe.

She was seen again on Feb. 2nd, 1927. At this time the symptoms were apparently much
the same and the cough and spit as bad as ever. The dullness over the left side and the displace-
ment of the heart were unchanged. On inversion, ½ oz. of odourless sputum was evacuated.
The X-ray examination after lipiodol was repeated and showed the dilatations to be more
marked.

On April 25th, 1930, the mother reported her to be better, but lipiodol demonstrated the
bronchiectasis to be still more extensive. The cough, however, was apparently less troublesome
and the sputum less in amount, and she had been attending school regularly. The physical
signs were practically unchanged, pectoriloquy and amphoric breathing being very marked.
She was 133 cm. in height and weighed 24 kgm. A comparison of Figs. 1, 2 and 3 shows in a
striking fashion the gradual extension of the mischief during the period of observation.

Group 2.—Children under observation between five and six years. This
group comprises five cases all of whom were reported in the original paper.

Case 2.—A.T., (5), a female, aged 3 years and 10 months came under observation on
October 7th, 1925, with the complaint that for 2 years and 9 months she had had a cough which,
during the last 9 months, had been accompanied by a yellow spit. She had had measles at 1 year

* Numbers in brackets represent the case numbers in the original communication1,
and pneumonia at 2½ years of age. The cough had been present since the attack of measles and the spit since the attack of pneumonia. During the night, but especially on waking in the morning, the child was subject to fits of coughing when she brought up about 1 drm. of pus. Otherwise she appeared perfectly well. She was a healthy looking child of normal height (97 cm.) but slightly under weight (13 kgm.). The Pirquet reaction was positive. Examination of the chest revealed an impaired note over the right front below the nipple and in the left lateral region. The R.M. was tubular at the angle of the left scapula and was accompanied by much moist râle. After inversion and coughing, ½ drm. of a greenish spit was obtained without
change in physical signs. X-ray examination of the chest revealed a doubtful fibrosis at the left base. Lipiodol demonstrated that the bronchi in both lower lobes, but especially the left, were definitely dilated.

This child was last seen on May 17th, 1930. She had been quite well except for a morning cough during which she brought up a drachm of pus. Her height was 117-5 cm. and her weight, 19-4 kgm. The percussion note was impaired at the left base where the R.M. was tubular. After inversion and coughing pectoriloquy became audible. The X-ray examination after lipiodol showed the condition to have become much worse.

Case 3.—P.R., (23), a girl, first came under observation on October 18th, 1922, at the age of 7 years and 10 months with a history of a cough since before she was one year old. At 3 years of age she had had broncho-pneumonia and since then the cough had been worse, coming in bouts and lasting for as long as an hour at a time. No history of sputum was obtained. At the age of 7 years she again had pneumonia and according to the doctor who attended her the left lung did not clear up. On admission to hospital she was an undersized child measuring 102 cm. and weighing 12-1 kgm. The left chest was found to be smaller than the right, with dullness to percussion at the left apex and over the left lower lobe where the R.M. was defective and tubular. An X-ray examination of the chest revealed a dense shadow all over the left side of the chest with a somewhat honeycomb appearance at the apex. The heart and trachea were displaced to the left.

She was seen again on June 4th, 1925, when aged 11 ½ years. During the interval the cough had persisted and there was still no history of sputum, but on posturing 2 drm. of a thick mucopurulent odourless expectoration were obtained. She weighed 19-1 kgm. and measured 111-5 cm. There was still dullness over the left side with an amphoric R.M. in the lateral region. An X-ray examination on this occasion still showed a dense shadow all over the left side with clearer areas at the apex suggesting cavitation. The heart and trachea were displaced to the left. Injection of lipiodol at this time demonstrated definite bronchiectasis in the left lower lobe.

On April 25th, 1930, she was seen again. She was now 16 ½ years old. On the whole she had been better in her general health but the cough and spitting had persisted and she was occasionally dyspnoeic. Menstruation had begun at 14 years. The left chest was flat and shrunken with deficient movement. The apex beat was best felt in the 5th space, 5 ½ in. to the left of mid-sternum. There was dullness over the left back and in the left lateral region with amphoric R.M. and pectoriloquy. The X-ray after lipiodol showed an increase in the cavitation on what had been present in 1925 and a superadded scoliosis.

Case 4.—J.F., (18), a boy aged 4 years when he was first seen on Feb. 25th, 1925, with a history of having had 6 months previously an acute illness characterized by cough, dyspnœa and vomiting. An X-ray one month after this acute illness revealed a shadow throughout the left lung with the heart drawn over to the left. The condition was diagnosed as an unresolved pneumonia. He was slightly undersized, weighing 13-75 kgm. and measuring 94 cm. He had a troublesome cough but no history of spitting. There was dullness to percussion all over the left side of the chest with an amphoric R.M. in the axilla and moist rale all over. X-ray examination showed a shadow throughout the left lung with slight tubular clear areas suggestive of bronchi to the base and a honeycomb appearance at the apex. After the injection of lipiodol, saccular dilatation of the bronchi throughout the left lung was revealed (Fig. 4).

In Feb., 1929, his condition was unchanged. He was still coughing but without spitting; his colour was good and there was no clubbing of the fingers. He was 118 cm. tall and weighed 21 kgm. There was diminished expansion on the left side of the chest with an impaired note in the left lateral region and left front. The R.M. was tubular and pectoriloquy was heard in the axilla. Lipiodol demonstrated the dilatation to be more marked than four years previously (Fig. 5).

In March, 1930, artificial pneumothorax was induced, when it was found that the cavitation could be in great part obliterated (Fig. 6).

Case 5.—J.F., (17), a boy aged 9 years, came under observation on August 15th, 1925. He had had influenza at 3 and measles and whooping-cough at 4 years of age, since when he had been troubled with a cough and subject to febrile attacks. He came under observation during a febrile attack. He was an undersized boy measuring 108 cm. and weighing 17-2 kgm. His colour was good and there was no clubbing of the fingers. The Pirquet tuberculin reaction was positive. The percussion note was dull at the right base behind below the angle of the
scapula with a very deficient R.M. After posturing 1 drm. of thick purulent sputum devoid of all odour was evacuated, and the dullness at the right base became less intense and the R.M. tubular. X-ray examination revealed widening of the mediastinum and a shadow at the right base; and after lipiodol, a slight but definite degree of dilatation of the bronchi in the right lower lobe.

He was seen again on Jan. 31st, 1929, when he was said to be well, eating and sleeping well, and playing normally. He still had a cough but no spit. The physical signs were negative for disease.

On March 28th, 1930, he still looked well but had a dry unproductive cough. The physical examination was negative, and X-ray examination after lipiodol did not reveal any bronchiectasis.
Case 6.—J.C., (15), a boy first came under observation at the age of 4 years with a history of whooping-cough at one year, and cough and spit ever since. At 3 years he had contracted measles and since then the cough and spit had been worse. The spit latterly had been frequently streaked with blood, and at times there had been definite haemoptysis. The Pirquet tuberculin reaction was positive. The chest was pigeon-shaped, with dullness at the right base behind and in the right lateral region and abundant moist râles at both bases. X-ray examination revealed shadows at both bases and an appearance suggestive of cavity at the right base.

In August, 1925, at the age of 6 years, he was still troubled with cough and spit, especially at night or after violent exercise. His height was 102 cm. and weight 15-4 kgrm. There was dullness to percussion over the left back and front, and X-ray examination revealed slight honeycomb shadows at both bases with the suggestion of cavity at the right base. Lipiodol revealed moderate tubular dilatation of the bronchi in the left lower lobe. Otherwise the conformation of the bronchi seemed normal.

He was seen again in April, 1930. Cough was still troublesome and there was some spit. The percussion note was impaired at the left apex in front and at the left base behind. The R.M. over the back was definitely tubular where the whispered voice was also well heard. After inversion and coughing no change resulted in the physical signs. Lipiodol on this occasion did not reveal any definite bronchiectasis, though one year previously (April, 1929) the dilatation seemed as marked as it had been in 1925.

Group 3.—Children under observation between three and four years.

This group includes three children all of whom were also the subject of discussion in the original paper.

Case 7.—C.C., (9), a boy first seen in November, 1925, at the age of 4 years and 10 months. He had had measles and whooping-cough at one year, and a cough and purulent spit since then. The cough and spit were worse in the evening. There was no fever and the Pirquet reaction was negative. His height was 97 cm. and weight 13-1 kgrm. The fingers were clubbed. Expansion of the left lung was diminished and there was dullness to percussion all over the left side, back and front, and in the lateral region. The R.M. was deficient especially in the axilla where it was tubular. On posturing, 3 drm. of purulent sputum were obtained, following which the R.M. became highly tubular in the axilla and lateral region. X-ray examination of the chest showed a honeycomb shadow all over the left side with the heart drawn to the left. Lipiodol injection revealed bronchiectasis at the left base.

He was seen again on Feb. 21st, 1930. He was able to run about but was dyspnoeic. The cough came and went. There was no sputum. Cyanosis of the lips and clubbing of the fingers were present. The percussion note was impaired at the left base but there was no amphoric breathing nor pectoriloquy but much râle was present. Lipiodol at this time showed a marked increase in the degree of dilatation of the implicated bronchi.

Case 8.—T.M., (12), a boy, came under observation on May 14th, 1925, when 9 years old. He had had whooping-cough at the age of 21 years and there had been present ever since a cough accompanied by a profuse yellow spit. Five months previously he had developed a right-sided pneumonia followed by empyema which was drained and healed satisfactorily, but as the cough persisted, and in fact was becoming worse, and the purulent expectoration more profuse, he was referred to the medical side for an opinion. At this time he was a healthy looking boy but much undersized, measuring 105 cm. and weighing 24 kgrm. He had a good colour and there was no clubbing of the fingers. The Pirquet test was negative. Examination of the chest revealed an impaired note at the left base with a tubular R.M. at the angle of the scapula. The right chest was clear. After inversion and coughing up 4 oz. of muco-purulent expectoration devoid of all odour, the percussion note at the left base became clearer, the R.M. definitely amphoric in character and pectoriloquy could be appreciated. An X-ray photograph of the chest showed a slight shadow at the left base and after the injection of lipiodol (May 26th) extensive dilatation of the bronchi of the left lower lobe. This boy was in hospital for 8 weeks during which time his condition remained stationary, the daily amount of sputum varying between 1 and 2 oz. The temperature was normal during the whole residence.

In 1929, artificial pneumothorax with subsequent oleothorax was induced. Lipiodol at this time showed the bronchiectasis not only to be more severe in the left lower lobe but to be
PROGNOSIS IN BRONCHIECTASIS

commencing in the right. The cough became less frequent and the sputum less purulent but he was dyspnoic. Later the cough and spit returned as bad as ever.

Case 9.—A.S., (19), a girl first came under observation on March 6th, 1926 at the age of 8 years on account of cough and wasting of 8 months' duration. There was a history of broncho-pneumonia at 15 months and again at 27 months of age, whooping-cough at 2½ years with a slow recovery and broncho-pneumonia at 4½ years at which time she was very ill and has never been well since. Eight months previously she commenced to complain of pain in the left side and developed a cough which was most troublesome on waking in the morning, and was accompanied by a yellow spit. She was an undersized child 100 cm. tall and weighing 15.2 kgm. There was slight cyanosis but no clubbing of the fingers. The Pirquet reaction was negative. The percussion note was impaired all over the left side of the chest but definitely dull over the back with an amphoric R.M. and cracking rales at the base. On posturing and coughing 2 drm. of odourless sputum were evacuated and the R.M. at the base became intensely amphoric.

Fig. 7.—Case 10. 13.6.27.

The X-ray examination of the chest showed a shadow at the left base with the heart pulled over to the left, and after lipiodol, dilatation of the bronchi of the left lower lobe.

When seen on April 7th, 1930, the cough and spit were unchanged. Otherwise she seemed well. She was a highly coloured girl with cyanosis of the cheeks but no clubbing of the fingers. Her height was 127.5 cm. and her weight 23.4 kgm. The percussion note was impaired at the left base with defective R.M. and much râle but no pectoriloquy and no amphoric breathing. An X-ray photograph after lipiodol showed the condition to be quite as marked as 4 years previously.

Group 4.—Children under observation between three and four years. The following five cases came under observation during 1927 and are now recorded for the first time.

Case 10.—A.S., a boy, came under observation on June 6th, 1927, when aged 12½ years with a history of cough and spit of 3 months' duration. He had had measles, whooping-cough and pneumonia at the age of 2 years but made a good recovery from these. The cough had gradually got worse and was often severe enough to induce vomiting. He was a big boy, 152 cm. tall and
weighing 29.5 kgm. The percussion note was impaired at the right base with amphoric breathing close to the mid-line low down, where pectoriloquy was also well heard. 2 c.cm. of sputum were obtained on posturing. The X-ray examination after lipiodol showed a slight but definite degree of bronchiectasis at the right base. This condition had apparently developed spontaneously (Fig. 7).

On April 3rd, 1930, when aged 15½, he was again seen. He was quite well and the cough had disappeared. His height was 167-5 cm. and weight, 48-5 kilos. The percussion note was still slightly impaired at the right base with deficient R.M. but no amphoric breathing or whispered pectoriloquy were heard. Lipiodol injection showed the bronchi to be normal in conformation (Fig. 8).

Case 11.—W.B., a boy, aged 7 years, was first seen on May 5th, 1927 with a history of cough of 6 years' duration. He had had pneumonia at 11 months and again at 18 months, and measles at 21 months. Since the first attack of pneumonia he had had a cough. He was a small boy, 110 cm. in height and weighing 16·8 kgm. There was an impaired note at both bases

with much moist rale. The whispered voice was well heard at both bases. 2 drm. of fluid greenish pus were obtained on inversion. Lipiodol demonstrated bronchiectasis at both bases.

He was seen again on May 28th, 1930, when it was reported that he was perfectly well except for the cough and spit which had always been present. The physical signs were unchanged. 1 drm. of sputum was obtained on inversion. The X-ray examination after lipiodol showed the condition to be more extensive than in 1927, especially at the right base.

Case 12.—J.McB., a girl, was first seen on May 5th, 1927, at the age of 5 years and 9 months. At 11 months she had had pneumonia and immediately afterwards, measles. She made a good recovery but when 3½ years old began to cough, and this cough had returned each winter since. Just before coming under observation there was a history of haemoptysis. She was a small child weighing 16·3 kgm. and measuring 107 cm. in height. On examination of the chest, no dullness could be detected and there was no change in the R.M., but much moist rale at both bases. On inversion, 1 drm. of sputum was obtained. X-ray examination after lipiodol showed a tubular dilatation of the bronchi at the left base.

When seen again on April 29th, 1930, aged 9 years, she was 124 cm. in height and weighed 21·3 kgm. She still had a cough but only 2 c.cm. of sputum were obtained on posturing. She
looked well and her colour was good. There was slight impairment of the percussion note at
the left base where the R.M. was faintly tubular. The lipiodol injection was repeated and
revealed the bronchiectatic condition to be practically the same as noted three years previously.

Case 13.—W. McC., a boy aged 7½ years when first seen on Feb. 25th, 1927. He had had
broncho-pneumonia when 2½ years old and a cough and spilt had been present ever since. At
the age of 6, the tonsils and adenoids were removed, and 2 months later he had a second attack
of pneumonia followed by measles. The sputum was said to be abundant. He was a small boy
weighing 18·6 kgrm. and measuring 113 cm. There was slight clubbing of the fingers. He
was highly coloured but not cyanotic. The percussion note was impaired at the right apex in
front and at the left base behind. At the left base the R.M. was diminished but no pectoritoquy
was audible. The amount of sputum varied from 20 to 50 c.cm. daily. X-ray examination
showed slight mottling over the heart area and after lipiodol a slight degree of dilatation of the
bronchi at the left base (Fig. 9).

He was seen again on March 31st, 1930. At this time he was up to height for his age (135 cm.)
but 1·5 kgrm. under weight. He still had a cough but the spilt had disappeared. No clubbing
of the fingers could be appreciated although early clubbing was noted 3 years previously. The
percussion note was impaired at the left base with a diminished R.M. No spilt was obtained on
inversion. Lipiodol injection at this time failed to reveal any bronchiectasis (Fig. 10).

Case 14.—A. D., a boy, was first seen on Feb. 12th, 1927, at the age of 9 years because of
hoarseness and occasional pain in the chest. He had had measles and whooping-cough but had
made a good recovery from these. Two years previously he had had pneumonia but did not fully
recover. One year later he again had pneumonia and since then cough has been present. He
was a small boy with a height of 122·5 cm. and weighing 22·3 kgrm. His colour was good and
there was no clubbing of the fingers. Physical examination revealed impairment of the per-
cussion note at the left base with a tubular R.M. and fine moist rales at both bases. No sputum
was obtained on coughing even while in the inverted position. Injection of lipiodol showed
extensive saccular bronchiectasis at the left base.

This boy was seen again on July 15th, 1929. His height was then 135 cm., and his weight
27·28 kgrm. The percussion note was still much impaired at the left base but the R.M. was
not tubular though there was much fine rale at the left base no spilt could be obtained. X-ray
examination after lipiodol showed the bronchiectatic condition to be unchanged.

Discussion.

From a review of the above recorded fourteen cases, all of which have been observed over a longer period than three years, it is seen that a pre-existing bronchiectatic condition can disappear but, be it noted, that in each of the
cases (No. 5, 10 and 13) in which this was observed the degree of dilatation
was slight.

Our experience does not support Hutinell's contention that the earlier the age at which the lesion appears the more likely is it to recover, since of the
three cases which healed the average age at the apparent onset was 6·1 years, in
comparison with 3·1 years which was the corresponding age for the whole
series. In fact, Case 10, which of the whole series was the child in whom the
condition developed latest, namely at 12 years, was one of the children who recovered.

In three cases the condition remained unaltered and in these the average age at which the condition probably appeared was 2·1 years. In the majority of the cases, however, to be exact in 8, the condition steadily got worse. In
these cases the average age at which the disease appeared was 2·3 years. When
we further recollect that of the total 32 cases of definite bronchiectasis which
we have observed 12 have died the prognosis would undoubtedly appear to be
on the whole grave.

It might be suggested, and we admit with apparent justification, that it
would be the cases of shortest duration which would be most likely to recover.
but so far as the small series which we have been able to collect is concerned little support is lent to such a hypothesis. The average duration of the condition when first observed was in those who recovered 3-4 years; whereas in those who steadily got worse it was 4-2 years, and one of these had the shortest history in the whole series, namely, 3 months. This apparent though slight supporting evidence was, however, counterbalanced by the fact that one of the cases which steadily got worse had only been ill for 6 months, and many of them had not been of such long duration as two of those who recovered. It would seem rather that it was a matter of the particular cause of the inflammation than the individual age of the pulmonary fibrosis which determined its liability to disappear or progress.

In the following table we have summarized the details regarding the age of onset, duration and termination of the individual cases.

**TABLE 1.**

**SUMMARY OF 14 CASES OF BRONCHIECTASIS IN CHILDHOOD.**

<table>
<thead>
<tr>
<th>No. of case</th>
<th>Duration before observation</th>
<th>Age of onset</th>
<th>Result</th>
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<tbody>
<tr>
<td>1</td>
<td>5-0 yr.</td>
<td>1-75 yr.</td>
<td>worse</td>
</tr>
<tr>
<td>2</td>
<td>2-75 ..</td>
<td>10 ..</td>
<td>..</td>
</tr>
<tr>
<td>3</td>
<td>7-0 ..</td>
<td>10 ..</td>
<td>..</td>
</tr>
<tr>
<td>4</td>
<td>0-5 ..</td>
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<td>5-0 ..</td>
<td>4-0 ..</td>
<td>well</td>
</tr>
<tr>
<td>6</td>
<td>3-0 ..</td>
<td>1-0 ..</td>
<td>stationary</td>
</tr>
<tr>
<td>7</td>
<td>4-0 ..</td>
<td>1-0 ..</td>
<td>worse</td>
</tr>
<tr>
<td>8</td>
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<td>..</td>
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</tr>
<tr>
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<td>6-0 ..</td>
<td>1-0 ..</td>
<td>worse</td>
</tr>
<tr>
<td>12</td>
<td>2-5 ..</td>
<td>1-0 ..</td>
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</tr>
<tr>
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<td>14</td>
<td>2-0 ..</td>
<td>7-0 ..</td>
<td>worse</td>
</tr>
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</table>

**Conclusions.**

1. The prognosis in bronchiectasis in childhood is grave as the condition usually steadily gets worse and leads to a fatal termination.
2. Undoubted bronchiectasis following a chronic pneumonia may disappear but only when the degree of dilatation is slight.
3. The age of onset of the bronchiectasis would seem to influence the course of events: recovery is more probable in the examples which develop during later childhood.
4. During childhood the duration of the illness is of no prognostic help.

**REFERENCES,**