

INFLAMMATORY DISEASES OF THE BILIARY TRACT IN CHILDREN UP TO 3 YEARS OLD

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In spite of improved diagnostic possibilities the inflammatory diseases of biliary tract in earliest childhood are still late diagnosed and treated. It is partially due to the lack of physician's purposefulness and the atypical course of the disease as well as to the difficulties in examining sucklings and infants.

The aim of the present study is to summarize the clinical characteristics of the inflammatory diseases of the biliary tract in children up to 3 years old and the possibilities for their early diagnosis and treatment.

Material and methods

During a 10-year period a total of 43 sucklings and infants with while still living proved inflammatory process of the biliary tracts have been treated in the Clinic of Pediatrics, Higher Institute of Medicine, Varna. The data from the anamnesis and clinical observations were purposefully collected and analyzed in order to specifying the state of the biliary tract. Besides routine investigations a duodenal probe was carried out followed by microscopic, parasitologic, and bacteriologic investigation of the bile, bacteriologic investigation of the faeces as well as by determination of the functional state of the liver and of serum iron level.

Results and discussion

From a total of 43 children studied 30 are sucklings (see fig. 1). 22 of them are up to 3 months old. Neonatal infection was observed in 15 of them (dyspepsia, coli-enteritis, salmonellosis, dysentery, omphalitis, pyoderma, sepsis, an acute respiratory disease) followed by cholangitis. A pathologic pregnancy was established in 18,6 per cent of mothers of ill sucklings. Immaturity among these sucklings was 16,2 per cent. On table 1 one can see patients' distribution according to age and sex. Boys are who predominate. It corresponds with wellknown data about higher morbidity rates of boys, especially in early infancy. On fig. 2 and 3 the age differences for both sexes become more visible.

An acute course of the disease was observed in 61,3 per cent of the cases. On fig. 4 single symptoms and their frequency (in percentage) are shown. Earliest clinical manifestations of a part of the sucklings begin in the first 1—2 weeks after birth: torpid sucking, flabbiness, somnolence, frequent vomiting, lack of gaining weight. A diarrhoeal syndrome develops simultaneously or later (28,9 per cent of the cases). Main cholangitis signs appear after some days, or in case of a subacute course, after 2—3 weeks. They are as follows: an increasing jaundice (67,4 per cent) and hepatomegaly (90,6 per cent). There is also a splenomegaly in 69,7 per cent of the cases. Acholic faeces are observed in 21 per cent but urine

darkening and dark colouring of diapers is seen in 23,2 per cent of the sucklings. The painful abdominal syndrome is better expressed in older children. There are recidivans temperature crises (48,8 per cent) combined with leukocytosis (44,1 per cent), raising of neutrophils and young cell forms (37,8 per cent), accelerated erythrocyte sedimentation rate (39,5 per cent), hypoalbuminaemia (48,8 per cent) and increase of alpha₂-globulins (39,5 per cent of the cases). Biochemical cholestatic indexes are well-expressed, too: hyperbilirubinaemia (65,1 per cent), predominately of direct type, an increased alkaline phosphatase (53,4 per cent) and gamma glutamyl transpeptidase (48 per cent) both. Only in 2 infants an increased cholesterol level was found out. The functional state of the liver is affected in 65,1 per cent of the infants chiefly in sucklings. During the protracted course of the disease the infant undergoes a hypotrophy, its abdomen enlarges due to the present hepatomegaly and meteorism both (27,9 per cent of the cases). Chilyditi's syndrome is established in one infant. The jaundice retains, dyspeptic manifestations persist, the hyperbilirubinaemia which rarely exceeds 10 mg % retains, too. Gamma globulins, alkaline phosphatase and serum transaminases increase. In contrast to the infectious hepatitis serum iron does not increase. On the contrary, it is reduced in one third of the infants. The anaemic syndrome observed in 60 per cent of the infants is changed for the worse.

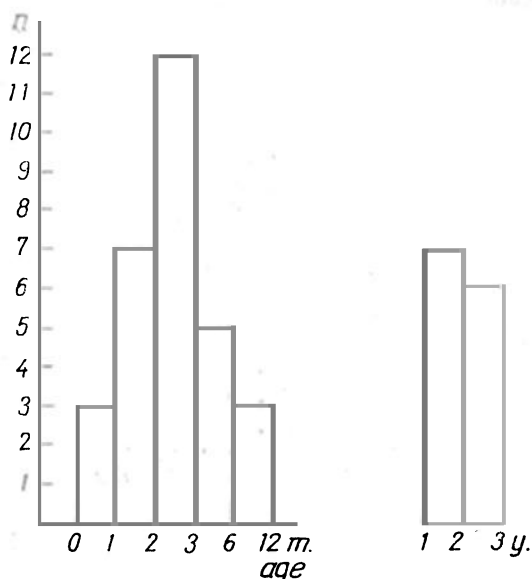


Fig. 1.

Table 1

Patients' distribution according to age and sex

Age	Total	Boys	Girls
1 month	3	3	—
2 months	7	5	2
3	12	5	7
6	5	4	1
12	3	2	1
0—1 year	30	19	11
2 years	7	5	2
3	6	5	1
	43	29	14

Most commonly, *E. coli* and *B. proteus* are isolated from faeces and bile of the patients. Bacterial flora is established in a total of 65,4 per cent of the infants. There is also a lamblyasis in 42,3 per cent of the older children living in bad home conditions of life.

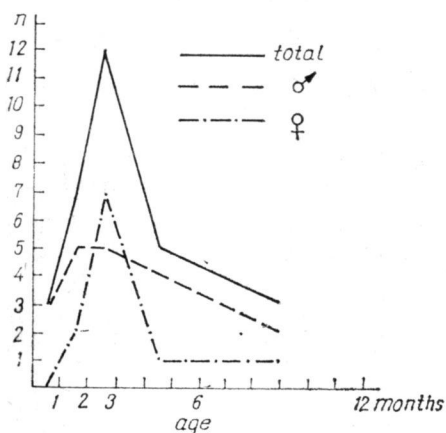


Fig. 2.

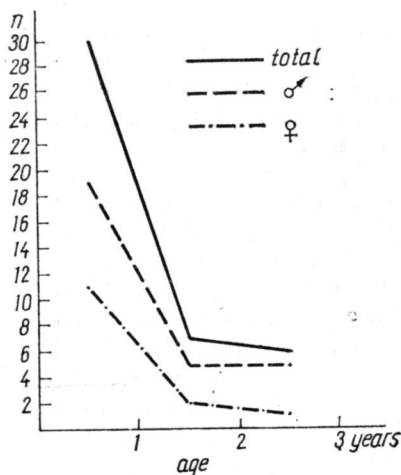


Fig. 3.

There is a severe course of disease in 9 infants (21 per cent), a middle severe one — in 13 ones (30,2 per cent). A fatal end of the disease is that in 3 infants. Both of them have had a cholangitis cirrhosis but the third one has had a severe sepsis. The treatment included antibiotics, corticosteroids, cholericics, spasmolytics, hepatoprotective drugs, polyvitaminous therapy, infusions with glucose-saline solutions, general tonization and symptomatic means, paraffin procedures on the liver region.

Recently, the number of communications on the importance of inflammatory diseases of biliary tract for sucklings' pathology increases (1, 3, 4, 6, 8, 10). Our observations are in concordance with these of a lot of authors (2, 6, 7, 9, 11 etc.) and allow us to accept that sucklings' cholangio-cholecystitis is not a rare disease any more. Predominantly, infants up to 3 months old are affected. The initial manifestations begin most commonly 2—3 weeks after birth. The well-expressed susceptibility to biliary tract infections in this age group could be explained with the transitory antibody deficit, the labile secretory function of the digestive tract as well as with the small size of the biliary tract itself. Some authors (1, 3, 5) establish inflammatory changes of the biliary tract in a part of infected newborns. According to our experience predominantly newborns at high risk are considered. After the first year of life the importance of lamblyasis increases, indeed. The inflammatory lesions of other organs make the diagnosis of cholepathies rather difficult. The latter ones are diagnosed more frequently at autopsy (12). Probably a part of these diseases are healed without recognition because of the wide application of antibiotics nowadays. The improving of the diagnostics of these diseases involves a purposeful clinical examination and a wider use of duodenal probe in patients with unclear temperature states, persisting dyspeptic syndrome, hyperbilirubinaemia, and hepatosplenomegaly.

Based on our study the following conclusions can be drawn:

1. The inflammatory diseases of the biliary tracts are not rare when sucklings' age and early infancy are considered.
2. The disease is characterized by a main clinical triad including a dyspeptic

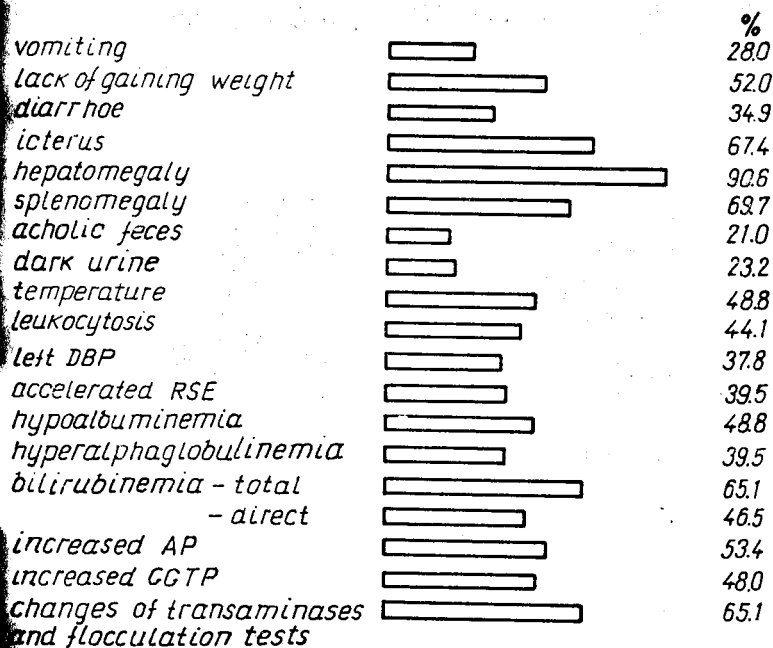


Fig. 4.

syndrome, hepatomegaly, and cholestasis. Most commonly facultatively-pathogenic bacterial flora is isolated from bile samples of sucklings but in older infants the *Lamblia intestinalis* can be found out in combination with bacterial flora.

3. The diagnostics of the disease and therapeutic results both can be successfully improved by purposeful and timely performed duodenal probe.

4. The protracted course of the illness in some patients and the frequent affection of the functional state of the liver (chiefly in sucklings) necessitates long-lasting dispensaire observation and competent complex treatment of the patients.

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ВОСПАЛИТЕЛЬНЫЕ ЗАБОЛЕВАНИЯ ЖЕЛЧНЫХ ПУТЕЙ У ДЕТЕЙ В ВОЗРАСТЕ ДО ТРЕХ ЛЕТ

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Р Е З Ю М Е

Исследовано 43 ребенка в возрасте до трех лет, у которых установлен воспалительный процесс желчных путей и желчного пузыря. Большинство детей (30) — грудного возраста, а из них 22 ребенка — в возрасте до трех месяцев. Большая часть всех детей были мальчиками (67 %). Заболевание характеризуется протрагированным ходом — гематоспленомегалией, рецидивирующим диспепсическим синдромом, интоксикационным синдром, холестазом. У старших из этих детей более выражен болевой синдром. У 65.4 % исследованных больных изолирована бактериальная флора из желчи, причем у 42.3 % из них установлена лямблиарная инвазия (также преимущественно у старших из этих детей). Функциональное состояние печени повреждено у 65.1 % всех детей и это преимущественно дети грудного возраста.

Авторами сделан вывод, что воспалительные заболевания желчных путей встречаются часто и в наиболее раннем возрасте. Своевременное диагностирование и комплексное лечение этих заболеваний имеют существенное значение для предупреждения воспалительного процесса и повреждений печени.