

ROTAVIRUS GASTROENTERITIS IN SUCKLINGS

I. Ruseva, V. Yonkova

Key-words: rotavirus gastroenteritis — incidence — clinics — sucklings

The acute diarrhoea has still a prominent part in infant's morbidity and mortality. The acute gastroenteritis occurs most often, indeed. During the last decade it was clarified that 60—70 per cent of these cases were not caused by enteropathogenic bacteria. Numerous investigations showed that most non-bacterial gastroenterites were with viral etiology. Rotaviruses were demonstrated to be one of the most frequent etiological agent for the acute diarrhoea in early infancy (30—63 per cent) (1, 2, 4, 6, 7, 9).

The purpose of the present study is to determine the incidence of the acute diarrhoeal syndromes in hospitalized sucklings with rotavirus etiology and to present the clinical characteristics of the acute rotavirus gastroenterites.

Material and methods

During the period from October 1981 till the end of April 1982 a total of 134 sucklings with a main clinical symptom "acute diarrhoea" were hospitalized in the Pediatric Clinic and virologically examined. Viral agents were proved in faecal matters by using counter immunoelectroosmophoresis and electron microscopy. Any faecal samples were parallelly tested for enteropathogenic bacteria.

Results and discussion

Rotavirus was present in 34 sucklings (25,3 per cent). Faecal samples were negative for enteropathogenic bacteria. The patients' distribution according to age and sex is presented on table 1. It can be seen that sucklings possess rotavirus

Table 1

Patients' distribution according to age and sex (rotavirus infection is proved)

Age	0—3 months	3—6 months	6—12 months	Total number
Examined	52	41	41	134
Positive	13	11	10	34 (25,3 %)
Boys	10	7	5	22
Girls	3	4	5	12

infection susceptibility independently of the age. The sucklings of the first and second half-year of life are affected to the same extent while according to literature data their morbidity is lower in the first six months (3). It is likely that man-

ner of nutrition contributes to the greater morbidity in newborns. The youngest suckling examined is 22 days old. 21 sucklings of a total of 24 ones aged up to 6 months are on bottle-feeding or mixed mother's and cow's milk nutrition. The number of ill boys predominates which corresponds to the known data about their greater vulnerability in early infancy.

The acute diarrhoea presents the most important symptom in the clinical picture. It is found in 100 per cent of the cases. There are numerous defecations — between 3—4 up to 10—12 daily 4—9 days long. The faecal matters are abundant, watery, yellowgreen-coloured, with sour-sweetish smell without blood admixture. There is vomiting in 81 per cent of the sucklings; higher temperature over 38 °C in 69 per cent, dehydration symptoms — in 45 per cent, restlessness attacks — in 43 per cent, and symptoms of a respiratory disease — in 18 per cent. We establish a slightly expressed acidosis in 18 per cent of the patients but a stronger one in 8,8 per cent; hyponatremia in 29,4 per cent, hypokaliemia in 23,5 per cent, blood urea increase in 8,8 per cent, an increased serum transaminase activity — in 31,5 per cent. RSE is accelerated in 82 per cent of the cases. Leukocytosis is slightly expressed. The course of the disease at this age is mild and middle-severe. However, it was rather severe in 3 sucklings in the first trimester of life which were on spoon-feeding. The treatment of the severe forms includes additionally antibiotics. It consists in most cases of dietary feeding, peroral and intravenous dehydration, and symptomatic drugs. Similar clinical characteristics is already described in the pediatric literature (1, 3, 5, 8, 11). Our study covered sucklings in cold months. In January there is the highest incidence rate of rotavirus gastroenteritis. A series of authors report a seasonal distribution of the acute gastroenteritis with rotavirus etiology (1, 3, 5, 7, 9, 10, 12).

Based on our investigation the following conclusions can be drawn:

The clinical picture of rotavirus gastroenteritis in sucklings is characterized mainly with a dyspeptic syndrome (both upper and lower one). Sucklings on mixed and even bottle-feeding are more often affected. The treatment is symptomatic. The dietary nutrition and rehydration by using glucose-saline solutions has a determinant importance. During the cold months the viral etiology of the acute diarrhoea is more often than it is assumed in paediatric practice.

REFERENCES

1. Дроздов, С. Г., и др. Ротавирусный гастроэнтерит. М., Медицина, 1982, 156 с. — 2. Нестерина, Л. Ф., Л. А. Шекоян. *Вопр. охр. матер. и детства*, 1980, № 9, 38—42. — 3. Спасова, Н., и др. *Педиатрия*, 1981, № 5, 470—475. — 4. Шиндаров, Л., и др. *Эпидемиол., микробиол. и инфекц. болести*, 1982, № 4, 273—279. — 5. Briscout, F. *Ann. Pediatr.*, 24, 1977, No 2, 823—826. — 6. Carnot, J. F., et al. *J. Paris. de pediart.*, 1977, 15—16. — 7. Forster, J., et al., *Klin. Padiatr.*, 191, 1979, No 5, 472—476. — 8. Groupe de travail scientifique de l'OMS (Geneve). *Bull. World Health Organ.*, 58, 1980, No 4, 39—557. — 9. Hieber, J. P., et al. *Amer. J. Dis. Child.*, 132, 1978, No 9, 853—858. — 10. Yonkova, V. A., G. H. Kapreljan. *Rev. Roum. Med. — Virol.*, 32, 1981, 161. — 11. Tabin, R., D. Nussle. *J. Infect.*, 141, 1980, No 1, 32—39. — 12. Wal-Nakib, W., et al. *Internat. J. Epidemiol.*, 9, 1980, No 4 355—359.

РОТАВИРУСНЫЕ ГАСТРОЭНТЕРИТЫ У ГРУДНЫХ ДЕТЕЙ*И. Русева, В. Йонкова***РЕЗЮМЕ**

За период с 1. X. 1981 г. по 30. IV. 1982 г. исследовано 134 грудных ребенка с острым поносом. Посредством иммуноэлектроосмофореза и электронной микроскопии в калах больных детей обнаружены вирусные агенты. У 34 ребенка (25,3 %) установлено наличие ротавирусов. В клинической картине доминирует понос. Заболевание отмечается чаще у детей на искусственном и смешанном питании. В холодные месяцы года вирусная этиология острых поносов встречается чаще, чем это обычно предполагается в педиатрической практике.