Roseola Infantum

Report on a case by

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"In the majority of infants and children between the ages of six months and three years, there occurs a disease in which difficulty of diagnosis for the physician and worry for the parents can hardly be greater during its stormy three to four-day course, and can hardly be less when the rash, diagnosis and end of the disease all happily appear at one and the same time." (1).

On the morning of 10th November 1954 a healthy well-nourished male, (P.M.), 10½ months old, was noticed by his mother to be slightly "off colour". She took his temperature but there was no fever. He took his morning feeds quite well, but refused almost all food in the afternoon. At about 6 p.m. the baby was felt to be hot and a temperature of 102.2°F. (rectal) was recorded. There was no cough or any catarrhal symptom. Examination of the baby did not yield much help towards towards arriving at a diagnosis. The lungs were clear; the spleen not palpable; there were no enlarged lymph-nodes; both ear-drums were normal; the pharynx was very slightly congested; there was no evidence of meningeal irritation; the urine and stools were normal. A provisional diagnosis of an upper respiratory tract infection was made and Penicillin was given by injection that same evening in 8/hourly doses of 500,000 units. The baby passed a restless night and he began to vomit the glucose/saline drinks which were offered to him. Penicillin was continued on the second day of the illness, yet the temperature rose to 105°F (rectal). The baby was now drowsy, but very irritable. The vomiting, however stopped. The baby was again examined but this yielded no concrete results. The Penicillin was discontinued and Tetramycin 150 mgms 6/hourly was given instead.

On the third day of the illness the temperature was 102°F. (rectal) in the morning and 103.2°F. (rectal) in the evening. The baby was still very restless in the morning, but in spite of the fever he began to brighten up in the afternoon. The persistent fever caused some anxiety about possible developments. The morning of the fourth day found the baby afebrile and a good deal happier. There was no critical perspiration during the rapid subsidence of the fever which occurred during the night. In the evening a rash appeared on the abdomen, consisting at first of a few rosered macules 2 to 3 mm. in diameter, which were not elevated above the skin and faded on pressure.

On the following day the eruption spread to cover most of the trunk and neck. There were no macules on the face or extremities. The baby remained well and there was no coming back of the fever. A diagnosis of Roseola infantum was made. The rash faded on the sixth day and there was an uneventful recovery. There was no pigmentation or desquamation. An examination of the blood on the seventh day revealed characteristic cellular changes: —

W.B.Cs . . . 6000 per c.mm.	Polymorphs . . . 11%
	Lymphocytes . . 79%
	Eosinophils . . . 2%
	Monocytes . . . 8%

Comment.

Roseola infantum is very little heard of, but it is probably far more common than is realised. The diagnosis is often missed unless the condition is kept in mind.

The first detailed description was given by Zahorsky (2) in 1910 and 1913, but little attention was given to these papers until

the simultaneous publication of papers by Levy and by Veeder and Hempelmann in 1921. Veeder and Hempelmann first called attention to the characteristic changes in the cellular content of the blood. These have since been corroborated by numerous observers.

The disease is known by a variety of names — Roseola infantum, the Rose-Rash of infants, Exanthema subitum, Exanthema criticum, Pseudorubellla, Critical Pre-eruptive fever, Sixth Disease.

The specific aetiology is unknown. A virus infection is however the most likely cause. Other possibilities put forward are i. allergy and ii. grippe-like infections. (3) Very characteristically, fully 95% of all cases occur in infants under 2½ years of age. 75% of all cases are found in infants between 6 and 18 months old.

The incubation period is 8-14 days, though Garvin puts it at as long as 41 days. The onset is sudden, and quite often fever is the first symptom to be noticed. Vomiting is common. Convulsions may set in initially and this has been observed on several occasions. At this stage Meningitis or Encephalitis may be suspected. The infant is restless, constipation is more frequent than diarrhoea, and often the child may wake up frequently at night with sudden cries of pain, suggesting an acute Otitis.

The fever falls by crisis on the third or fourth day when there appears a rubelliform rash, first on the back and abdomen, later rapidly extending over most of the body, but with remarkably fewer lesions on the extremities and the face. The rash may occur on occasions before the temperature has dropped to normal, but almost never until the temperature has started on it's downward course. There are no important complications or sequelae.

The blood findings are striking. On the first day a slight leucocytosis may be found, but on the second, third and fourth days of the disease a progressive leucopenia develops. The leucocyte count ranges from three to five thousand. The principal feature is a granulocytic leucopenia. The lymphocytes are relatively, if not actually, increased up to 70 or 90%. After the eruption the blood picture rapidly returns to normal. The question of communicability is still uncertain; but several epidemics have now been described. (4) (5) (6).

The diagnosis offers two problems:— (i) the recognition of the disease during the pre-eruptive stage; (ii) the differentiation of the eruption from other exanthemata.

In the pre-eruptive stage diagnosis is based on all clinical manifestations of other common diseases of infancy and early childhood. A blood examination reveals the characteristic picture. The differentiation from Measles and Rubella with which it may be confused is not difficult. The absence of Koplik spots, photophobia, coryza and conjunctivitis, differentiates it from Measles, while the time of appearance of the rash and the lack of enlarged tender lymph-nodes, distinguishes it from Rubella, which is rare in infants.

Treatment is purely symptomatic.

References:—

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