Lesson of the Week

Rash in early pregnancy

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The risk to the fetus from primary rubella occurring in the first trimester of pregnancy is considerable.¹ Despite the immunisation programme about 20 to 60 cases a year of congenital rubella are reported in the United Kingdom.² We report on a case which illustrates the unfortunate consequences of failing to consider the possibility of rubella in a patient presenting with a rash in early pregnancy.

Case report

A girl was born at 39 weeks' gestation with forceps assistance. Birth weight was 2.28 kg (less than 10th percentile), length 36 cm (less than 10th percentile), and head circumference 33 cm (10th percentile). At four days petechial haemorrhages were seen but no other abnormal features noted. Serological investigations for congenital infection indicated the presence of rubella specific IgM, thus establishing a diagnosis of congenital rubella syndrome. Over the next few weeks the following abnormal features were noted: unilateral cataract with microphthalmos, patent ductus arteriosus, weight, length, and head circumference below 10th percentile, hepatosplenomegaly, and probable deafness (based on clinical testing and abnormal crossed acoustic response). At five months early signs of spasticity appeared.

On being questioned the 36 year old mother stated that at six weeks' gestation (having already had a positive pregnancy test) she had consulted her general practitioner with a generalised rash and sore throat. She then developed painful stiff joints, especially of the hands and knees, which persisted for several weeks but were not reported to the general practitioner. A clinical diagnosis of scarlet fever was made and no laboratory investigations were performed. Her 6 year old daughter had had a similar illness 17 days before and her 3 year old son a similar illness that had begun one day before that of the mother. Rubella was known to be affecting children at the boy's play-school. After congenital rubella had been diagnosed in the infant the maternal serum taken for antenatal screening at

Investigations for rubella must be performed if a macular rash occurs in early pregnancy

12 weeks' gestation was retrieved and shown to contain rubella specific IgM, indicating primary rubella in the previous few weeks.

Comment

This woman's illness at six weeks' gestation was almost certainly primary rubella. She had not previously been screened for rubella immunity as this service had not been offered at the hospital which she had attended during her previous two pregnancies. She had been screened for rubella immunity by radial haemolysis in this pregnancy at 12 weeks' gestation and found to be immune—that is, having serological evidence of rubella infection at some time previously. The primary function of rubella antibody screening is to decide whether rubella immunisation should be offered after delivery. Screening does not routinely include investigations to determine whether rubella has occurred earlier in the pregnancy. Such investigations are instigated only if the clinician informs the laboratory that either a clinical illness or a possible contact with rubella has occurred. If the relevant information had been elicited from this woman at her first antenatal clinic visit and if this information had been forwarded to the laboratory with her serum, rubella in the first trimester could have been diagnosed by the detection of rubella specific IgM.

If women are to be given the opportunity of therapeutic termination of pregnancy to prevent the birth of an infant with congenital rubella syndrome clinicians should consider a diagnosis of rubella whenever a woman in early pregnancy presents with a rash. An additional safeguard would be routine questioning at antenatal consultation as to whether any clinical illness or contact with rubella had occurred. If rubella cannot be excluded it is essential that appropriate laboratory investigations are performed.

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