Medical Memoranda

Thrombocytopenic Purpura Complicating Mumps

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Thrombocytopenic purpura in childhood is an uncommon condition. Clement and Diamond (1953) reviewed 96 cases, of which 68% occurred in association with acute infections, mainly of the upper respiratory tract. A search of the literature reveals only four documented cases of thrombocytopenic purpura complicating mumps; three of these occurred in adults and were recorded by Kolars and Spink (1958). The fourth patient, reported recently by Hyatt (1961), was an 11-year-old child. The clinical features of and the results of investigations on a patient recently under our care are described. The potential seriousness of the condition is indicated by the presenting symptoms.

CASE REPORT

A 6-year-old child was admitted to the Memorial Hospital after a transient left hemiparesis. She had been in normal health until three weeks earlier, when she developed mumps; the condition was treated at home with aspirin and bed-rest. Within six days the swellings had subsided and she appeared to have recovered. About two days later she had a slight epistaxis, and her parents noticed numerous bruises on her limbs which they attributed to falls. Later a few petechiae appeared on her thighs. No further signs of bleeding were noted until the evening of admission, when she complained of dizziness and right-sided headache. Shortly after this she became unable to walk or to use her left hand. When seen by her family doctor she had partially recovered, but a definite motor weakness was still present in her left arm and leg, and the left limb reflexes were diminished and the left plantar response equivocal.

There was no past history of any bleeding tendency, nor was there any familial diathesis, though her mother was alleged to bruise easily and sometimes noticed small red spots under her skin at the site of trivial local injuries, while a 4-year-old brother was subject to frequent nose-bleeds.

Physical examination revealed an alert, active child with a normal temperature and pulse. Blood-pressure was 120/80 mm. Hg, and there were no clinical abnormalities of the nervous system except for slightly diminished left abdominal reflexes. Several ecchymoses up to 5 cm. in diameter were present on the forearms, buttocks, thighs, and legs. Multiple petechiae were seen on the buccal mucosa, and scattered petechiae on the forearms. The Hess test was strongly positive. Liver and spleen were not palpable, nor were any enlarged lymph nodes present.

Relevant laboratory investigations on admission showed haemoglobin 11.1 g.%, packed cell volume 30%, W.B.C. 11,000 (band neutrophils 1%, segmented neutrophils 51%, lymphocytes 36%, monocytes 8%, eosinophils 4%). A few atypical lymphocytes, consistent with a recent virus infection, were present in the smear. Erythrocytes were normal in appearance. Platelet count was 21,000 per c.mm. Bleeding time was slightly prolonged at seven minutes, while clotting time was nine minutes, with poor clot retraction. Bone-marrow biopsy from the iliac crest revealed cellular marrow with numerous megakaryocytes, of which many were young forms with poorly lobed nuclei and absent or scanty platelet production; eosinophilia was also present. The cerebrospinal fluid was normal. No red cells were found in the urine.

The patient was treated immediately with a transfusion of 500 ml. of fresh blood, together with 40 units of Cortrophin ZN (corticotrophin), followed by 20 units 12-hourly. The latter was subsequently replaced after 10 days by dexamethasone 1.5 mg. daily.

During her first week in hospital there was a rapid disappearance of petechiae, and the Hess test became negative; further investigations included a repeat W.B.C. four days after admission of 5,400 per c.mm. (band neutrophils 1%, segmented neutrophils 37%, lymphocytes 47%, monocytes 14%, eosinophils 1%). Serum total proteins were 7.0 g.%, with a normal electrophoretic pattern. No L.E. cells were present. Paul-Bunnell test was negative, but mumps complement-fixation test was positive to 1 in 64. Successive faecal specimens revealed moderate amounts of occult blood for four days, though later specimens were negative. The platelet count rose gradually after the first few days to 50,000/c.mm. three weeks after admission, but at this stage there was a clinical relapse with further ecchymoses and return of a positive Hess test. The dosage of dexamethasone was increased to 2 mg. daily, and Cortrophin ZN was reintroduced at 40 units daily. No additional bleeding occurred, and the Cortrophin was gradually reduced to one administration weekly, while the platelet count again rose progressively during the following weeks.

Four weeks after admission the patient was discharged for continuation of treatment by her family doctor. The platelet count rose progressively to 200,000 during the subsequent weeks, and no further clinical or haematological relapse occurred when steroids and Cortrophin were gradually withdrawn. The child has remained in excellent health since.

Her 4-year-old brother, who contracted mumps at the same time, was found to have a positive Hess test, but the results of haematological examination were entirely normal with platelets of 170,000 per c.mm. The patient's mother also had a slightly positive Hess test but was likewise haematologically normal.

DISCUSSION

A case of thrombocytopenic purpura is presented as a rare complication of mumps in childhood. The pathogenesis is unknown, but is probably related to the platelet depression more frequently reported in other exanthemata, more especially measles and mononucleosis.

Though the incidence of haemorrhage is not related directly to the level of circulating platelets, as Kolars and Spink reported, steroid therapy can control bleeding without correcting the platelet deficiency. On the other hand, as Hyatt's case demonstrated, spontaneous remission can occur without the use of steroids. Our patient, however, had shown minor signs of bleeding for almost two weeks before admission, culminating in a sudden episode of presumed intracranial haemorrhage, because of which we felt that steroids were indicated. The response of the clinical relapse three weeks after admission to the reinstitution of Cortrophin therapy supports the effectiveness of this treatment.

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