

Haemothorax in the course of chickenpox

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Varicella pneumonia develops in 10–20% of cases of chickenpox occurring in adolescence or adult life.¹ Airflow obstruction, pleural effusion, and respiratory failure are less frequent.² Although several haemorrhagic pleuropulmonary complications have been described in the course of chickenpox, haemothorax has been observed only once.³ We describe a new case of this association.

Case report

A 13 year old girl, previously healthy, was admitted to hospital because of fever, a rash, and left sided chest pain. Physical examination showed a high fever, signs of a left pleural effusion, and a vesiculate, pustulate, non-haemorrhagic disseminated rash. A chest radiograph showed a left sided pleural effusion. The laboratory findings included: packed cell volume 0.32, haemoglobin concentration 10.7 g/dl, white blood cell count (WBC) $13.5 \times 10^9/l$ with a normal differential count. A tuberculin test gave a negative result. The coagulation time was seven minutes; bleeding time three minutes; prothrombin time 90% (all normal). The platelet count was $220 \times 10^9/l$. The antivariella antibody titre was: IgM 1/1280, IgG 1/640. The pleural effusion was heavily blood stained and laboratory examination showed packed cell volume 0.22, glucose 63 mg/dl (3.5 mmol/l), proteins 66 g/l, lactate dehydrogenase 1136 U/l, red cells $215 \times 10^9/l$ and WBC $4.0 \times 10^9/l$ with 61% polymorphonuclear cells. Ziehl-Neelsen staining and cytological examination for malignant cells were negative. The pleural biopsy specimen showed reactive mesothelial hyperplasia without evidence of granuloma or malignancy. Two pleural aspirations were performed (1500 ml total) and with physiotherapy and symptomatic treatment the chest radiographic appearances improved. The patient was discharged from hospital 20 days later symptom free. The chest radiograph showed slight thickening of the left costodiaphragmatic angle. Clinical and radiographic exam-

inations performed during the following 12 months showed no abnormality.

Discussion

Haemorrhagic pleuropulmonary complications in the course of chickenpox, including parenchymal intrapulmonary haemorrhage and serosanguinous pleural effusion, have been reported.¹ Coagulation disorders such as thrombocytopenia and deficient thromboplastin formation, deficiencies of factors IX and VIII, and altered capillary permeability with vascular wall necrosis have also been observed.^{4,5}

Haemothorax in the course of viral infections had not been described until 1982, when Gupta *et al*³ reported the unique association of chickenpox and haemothorax in a 30 year old man. In this case and ours coagulation was normal and other associated disease was not demonstrated. Papulovesicular haemorrhagic lesions in the pleural surface, similar to those in the skin, have been reported in one case of fatal varicella.⁶ In our patient, however, no haemorrhagic skin lesions were observed. Although direct vascular damage or an immune reaction localised in the pleura are the most probable explanations of haemothorax, these mechanisms have not been confirmed.

Haemothorax can appear exceptionally in the course of chickenpox and the spontaneous favourable evolution seen in our case and in that reported by Gupta suggests that extensive investigation is not required.

References

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Accepted 11 November 1985