MATERIAlS AND METHODS

1. Experimental Design.


3. Immunohistochemistry.


5. Conclusion.

ACKNOWLEDGMENTS.

REFERENCES.


5. Bradbury LE, Kansas GS, Levy S, Evans RL, Teledor TF. The CD19/CD21 signal transduc-

ting complex of human lymphocytes includes the signal transducing protein tyrosine phos-


Dr El Habbal and Professor Strobel comment: We thank Dr Wagner for his interesting com-
ments on our review on leucocyte adhesion deficiency (LAD) which focused on clinical presentation and management.1 We did not intend to discuss extensively the interrelation of homology of adhesion molecules and, for example, did not include the cadherins2 as a fourth family of adhesion molecules.

12. MIGRATION OF BONE BILATERAL CATHERER TO PULMONARY ARTERY

EDITOR,—We wish to report a serious complica-
tion that arose during insertion of a left-sided line, which was to be used to administer intra-
venous antibiotics to a 12 year old boy with cystic fibrosis. A fine bore bilateral catheter (Epiricatene-Cava-Catheter model No 2184, Vygon) was used. This model has a detachable bilateral indwelling catheter that is inserted through a supplied 19 gauge needle. The proximal end of the catheter contains a short metal rod that is anchored within the distal end of the external supply line to pre-
vent migration once sided. After venepuncture of the left basilic vein the catheter, unattached to the supply line, was threaded through the needle. The catheter was almost fully advanced so that the distal end might lie in a satisfactory position within the great veins. The needle was then removed from the vein and disengaged from the catheter by threading it in Luer-Lok. At this point the catheter was inserted in vision and when the needle was fully removed, the proximal end was still not visible. Chest radiography revealed the metal proximal tip of the catheter to be lying in the right pulmonary artery. The catheter itself was radiolucent. We presume that dynamic venous flow and negative intrathoracic pressure caused aspiration of the whole catheter into the pulmonary circulation. Subsequently, the patient underwent general anaesthetic and cardiac catheterisation. The catheter was successfully removed intact using a snare wire during a difficult and lengthy procedure.

We have used this type of line successfully for a number of years. The manufacturers inform us that this complication has occurred once before worldwide. They also stated that adhesion to the instructions included with the line, updated in April 1992, should prevent this complication. The instructions state that, after advancing the catheter through the needle to the desired position, ‘the catheter should then be fixed in its final position by applying slight pressure beneath the needle tip and the needle is then withdrawn ...’ However, there is no warning in the instruction leaflet of the potential complica-
tions reported here. An adverse event gathering that this will be highlighted in future.

The use of short and long indwelling venous catheters is known to cause a small risk of embolism to the heart and great vessels and has in the past led to both serious morbidity and mortality due to thrombus formation, infection, and perforation.3 For these reasons, attempted removal of embolised catheters or fragments is recommended. This has been achieved by mechanical lysis,3 or by cardiac catherisation.4

Embolism has been more commonly reported with use of the 'needle in catheter' form of cannula where during insertion the needle shears off the distal part of the catheter.4,5 This complication has led to widespread use of 'needle in catheter' form of cannulas, although these are not free from risk of fracture and embolism.6 Embolism due to disconnection of the catheter from the supply line has also been described6 and most catheters now in use have undetachable exter-
nal hubs to prevent this problem. The catheter used in this report was a standard model of the above safety features. For such lines to be used safely, it is necessary to ensure that throughout insertion the line is at all times both visible and held externally.

2. Trustler GA, Mustard WT. Intravenous poly-
4. Massumi RA, Ross AM. Atraumatic, nonsurgical tech-

PROPHYLAXIS OR MODIFICATION OF VARICELLA INOCULATION AFTER HOUSEHOLD EXPOSURE

EDITOR,—In his commentary on our paper Dr de Strooper raised several concerns about the use of oral acyclovir in varicella infection.7 We do believe that varicella should be
Simultaneous pulmonary infection with respiratory syncytial virus and human cytomegalovirus

EDITOR.—Respiratory syncytial virus (RSV) is the major cause of acute lower respiratory tract illness in infants and young children. The presentation and subsequent course of RSV bronchiolitis may be atypical in the presence of a simultaneous infection with other viral agents.1 During the winter of 1991–92, we studied children hospitalised for respiratory disease in a paediatric unit in Marseille. All patients were tested for viral infections and an information chart was made to determine the prevalence of multiple viral isolates and to assess the impact of dual infections on the severity of clinical disease.

Between December 1991 and February 1992, 405 children were hospitalised for respiratory disease. In all cases, nasopharyngeal wash specimens were taken on admission to the paediatric unit and simultaneously submitted to human cytomegalovirus isolation and respiratory virus fluorescent antibody staining. For human cytomegalovirus isolation, specimens were inoculated on human embryonic lung fibroblasts and a monoclonal antibody directed against the immediate early antigen (E13, Biosoft, Clonatec, France) was added 48 hours later to detect viral antigen expression. Simultaneously, indirect immunofluorescence assay was performed directly on nasopharyngeal secretions, using monoclonal specific antibodies against several viruses: RSV, influenza A virus, influenza B virus, parainfluenza virus type 1, 2, and 3 (Monolhu kit, Pasteur, France), and adenovirus (Biosoft, Clonatec, France).

The following data was obtained for each patient: age, sex, history and clinical symptoms, other infections, duration of hospitalisation, socioeconomic status, and ethnic group. From the 405 children hospitalised for bronchiolitis or respiratory disease, 195 (48%) presented viral infection; 165 were positive for RSV, 30 were positive for human cytomegalovirus, and 20 were simultaneously infected with RSV and human cytomegalovirus.

The frequency of RSV-human cytomegalovirus coinfection in our series (10%) was lower than that previously reported in other studies.1 2 3 The sex ratio was 1:1 and they were aged 1 to 8 months. Twelve of them were between 4 and 8 months old, hence they may have had congenital or perinatal human cytomegalovirus infection in utero. Of these, five were more than 6 months and 8 years old. One child had oral candidosis and one was simultaneously infected with Haemophilus influenzae and rotavirus. One had a history of pneumonitis, but all were born without underlying disease. None of them had other clinical or epidemiological risk factors. Several were from low socioeconomic groups. Three were of Spanish extraction, seven were North Africans, and two were black children. No specific clinical situation was correlated with the coinfection: five had fever over 39°C, four had severe bronchitis or pneumonitis requiring corticotherapy. However, there was no correlation between the duration of hospitalisation, the age of the children, the history of pneumonitis, and the severity of underlying disease.

Carers as children

EDITOR.—Aldridge and Becker in their article comment that there is uncertainty as to how many children carers are.4 We have recently completed two surveys into the health and social care needs of assessment of people with multiple sclerosis in Bradford and Huddersfield. We surveyed over 500 people who agreed to volunteer. Of those surveyed, 35% of the districts indicated that their children helped with either domestic or personal care. A further random sample of 192 were interviewed by face to face questionnaire. Approximately 40% of those with children under 16 years felt that their children helped more than they normally would with personal care. However, from the parents’ point of view it did not all seem to be the case. Approximately 40% felt that the multiple sclerosis had had little or no effect on their


References