A 63-year-old man presented with horizontal diplopia. Two years earlier he had a hemiparesis and sensory changes of the right side of the body which regressed in a few days. Examination did not reveal abnormalities other than oculomotor disturbances. With any type and any direction of lateral eye movements, the left eye remained fixed on the midline, while the right eye could only abduct from and return to the midline. In the vertical upward gaze, the right eye showed skew deviation with vertical divergence. Convergence was preserved. The pupillary reflexes were full. Laboratory studies showed: white-cell count was 11,840/mm³, red-cell count was 6,240,000/mm³. Hb 19.8 mg/dl., HCT 58.9% MCV 89% MCH 30.7%, MCHC 33.7% the platelets count was 311,000/mm³. With the 14C method, the circulating blood volume was found to be increased. A computed tomography scan showed an area of low density in the left parietal region with normal ven-tricular size; with contrast there were no changes. Chest radiographs were normal. Both carotid and basilar angiograms and ECG were normal. The EEG showed slight slowing in the left temporal area. Intravenous pyelograms revealed two left renal cysts. Two phlebotomies of 400 ml were made. One week later there was complete recovery of the ocular disorder. Two weeks after admission the patient was discharged from hospital with dipyriramole treatment.

The "one-and-a-half" syndrome usually results from a single, unilateral and relatively small lesion of the dorsal tegmentum in the lower pons. At first the abducens nucleus (VI) and/or the pontine reticular formation are damaged by this lesion and an ipsilateral conjugate gaze palsy is produced. Next damage by the same lesion to the ipsilateral medial longitudinal fasciculus, which lies at the same level or just above the abducens nucleus, accounts for unilateral internuclear ophthalmoplegia. The causes of the syndrome are varied. In our patient, the "one-and-a-half" syndrome resulted from a probable cerebral thrombosis in the vertebral-basilar system secondary to polycythemia, a condition in which the liability to cerebral thrombosis is increased. As far as we know, the present case is the first description of a "one-and-a-half" syndrome secondary to polycythemia, a potentially reversible cause.

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References
Table Lumbar puncture results:

<table>
<thead>
<tr>
<th>Culture (Gram and Z.N.)</th>
<th>Appearance</th>
<th>Pressure cm</th>
<th>Protein g/l</th>
<th>Globulin</th>
<th>C.S.F. (serum)</th>
<th>Chloride mmol/l</th>
<th>W.C.C. per mm³</th>
<th>Polymorphs %</th>
<th>Lymphocytes %</th>
<th>R.C.C. per mm³</th>
<th>Microscopy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1</td>
<td>Day 2</td>
<td>Day 18</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Appearance</td>
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<td>slightly xanthochromic</td>
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<td>Pressure cm</td>
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<tr>
<td>Protein g/l</td>
<td>3-4</td>
<td>4-8</td>
<td>9</td>
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<td></td>
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<td>Globulin</td>
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<td>mod increase</td>
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<tr>
<td>C.S.F. (serum)</td>
<td>4.5 (14-2)</td>
<td>3.5 (13-3)</td>
<td>2.8 (9-0)</td>
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<td>Chloride mmol/l</td>
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<td>W.C.C. per mm³</td>
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<td>Polymorphs %</td>
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<tr>
<td>Lymphocytes %</td>
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<tr>
<td>R.C.C. per mm³</td>
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</table>

Lumbar puncture results:

- No improvement occurred in the next 18 hours and ampicillin and benzylpenicillin were added to the treatment. Twenty-four hours later a gram positive rod appeared on culture and after consultation with the microbiology department, Septrin was prescribed and chloramphenicol was withdrawn. Over the subsequent 24 hours, although he was pyrexial, his conscious level improved. The organism, C. pyogenes was shown to be sensitive to Septrin but resistant to benzylpenicillin and ampicillin. However, with the patient's improved clinical state no alteration was made to his drug treatment. He became apyrexial after a further 24 hours and by the ninth day on Septrin was fully conscious. All medication was withdrawn with the exception of Septrin, which was stopped after a negative lumbar puncture the following week (table). Throughout the infection blood cultures were repeatedly negative. The patient was discharged one month after admission following mobilisation.

- Some samples of CSF were inoculated into Brewer's medium and Robertsms meat broth. The remainder was spun down and streaked onto horse blood agar and chocolate agar kept in 5-10% CO₂. The culture plates were incubated at 37°C. After overnight incubation small pinpoint, round, smooth colonies with zones of β haemolysis were isolated in pure culture on blood agar and growth was also seen on chocolate agar plates. The organism was also isolated from sub-culture from Robertsms meat broth. Microscopy of the cultured organisms showed straight gram-positive bacilli with few filamentous forms which stained uniformly and contained no spores. They were non-motile (by the hanging drop method, 22°C and 37°C) and the identification of C. pyogenes was based on biochemical tests. A relatively common cause of meningitis, by a gram-positive rod, is *Listeria monocytogenes* which was excluded by the motility and biochemical tests. These were checked in duplicate in peptone-water sugars with added serum and serum agar sugars from the agar plates and Robertsms meat broth. Catalase, oxidase, indole production, Voges-Proskauer and acid production from mannitol were negative. The oxidative fermentative test was fermentation positive and acid production occurred from glucose, lactose, maltose and sucrose. Antibiotic sensitivity tests were carried out on Sensitest agar by paper disc technique. The organism was resistant to vancomycin, rifampicin, gentamicin, netilmicin, Septrin, trimethoprim, sulphanmethaxazole, tetracycline and erythromycin. The organism was resistant to penicillin, ampicillin, chloramphenicol, fusidin, cephaloridine and clindamycin. The MIC of trimethoprin was reported for veterinary strains of *C. pyogenes* as 0-1–10 μg/ml. The concentration of trimethoprin in the CSF of this patient on day 18 was 2.3 μg/ml. *C. pyogenes* has been reported as the causative organism for an increasing list of human disease including subacute bacterial endocarditis, septic arthritis, empyema, abscess formation, *complication* of frostbite and vulvo-vaginitis. A report from the National Collection of Type Cultures stated that six isolates of *C. pyogenes* had been received since 1965, but the sites of isolation were not stated of the species of Corynebacteria reported to the PHLS Communicable Disease Surveillance Centre, Colindale, between 1975 and 1982, this is the only case of *C. pyogenes* isolated from CSF. In this patient the portal of entry and source of infection remained obscure. However, the patient was a retired farmer who had worked with livestock. It was noteworthy that *C. pyogenes* was resistant to the first line antibiotics for meningitis although the organisation has a wide range of sensitivity including Septrin, which was used in the treatment of this patient.

### References

6. Personal communication to Editor of C.D.R. Centre, Colindale.

### Primary meningeal melanomatos: limitations of current diagnostic techniques

Sir: Primary melanomata of the central nervous system are exceedingly rare except in association with giant pigmented cutaneous naevoid in children. Their origin is still debated although it is most likely that they arise from melanocytes in the leptomeninges. However, even after careful post mortem examination, subclinical primary lesions of the skin, choroid, uveal or gastro-intestinal tract cannot be absolutely excluded.

Recent reports have stressed the usefulness of computed tomography (CT) in the diagnosis of tumours involving the leptomeninges and in particular in raising the possibility of melanomatos. Likewise cerebrospinal fluid (CSF) cytology is extensively reported to be of use in the early diagnosis of meningeal malignant infiltrations. The present case illustrates the difficulties of making an early diagnosis despite the use of both the above mentioned diagnostic techniques.

A 68-year-old retired English milkman presented in January 1982, with a one year history of numbness initially in the right foot which spread to involve the whole leg and weakness in the right leg for two