Pain.—An attempt at assessing the prognostic importance of initial pain had to be abandoned owing to difficulties in estimating degrees of pain, often in retrospect.

Decompression.—Decompression of the facial nerve in the temporal bone was carried out at my request by Mr. R. L. Flett in five patients in whom no movement had been observed after 12 weeks. No dramatic results were observed, and the final result in all was assessed as grade 3. In six comparable patients who were not operated on the results were very similar, five being assessed as grade 3 and one as grade 2. Obviously, no conclusions on the efficacy of this form of treatment can be drawn on these few patients operated on so late in the course of the palsy.

Discussion

The value of a purely clinical study of Bell's palsy may be doubted. Electrodiagnosis can, of course, provide much information, but unless the techniques described by Gilliatt and Taylor (1959) can be developed, this information is of little assistance in the main problem of treatment. The prognosis depends on the existence and degree of denervation (Taverner, 1955), and this is probably determined within at most a few days of the onset at a time when electromyography can only establish the degree of paralysis. The clinical assessment of the completeness of the palsy is obviously open to error, but it is also not possible to do more than sample the facial muscles with an electromyography needle. Two out of three patients seen within six days of the onset will recover completely, and, in this series, a partial palsy within this period implied an absolutely good prognosis. This presumably would not apply to patients seen while the palsy was still advancing. Only one patient was seen in whom the palsy was incomplete two hours after the first symptoms and later became complete, but unfortunately this patient could not be traced. A partial palsy after the first six days does not necessarily imply full recovery.

The relatively bad prognostic significance of advancing years, a complete palsy, and herpes zoster has been confirmed (Taverner, 1955, 1959), and suggestive evidence has been obtained that recurrent palsy may also be unfavourable. The only absolutely bad prognostic sign was found to be failure of return of any movement after four weeks.

The main purpose of the investigation was to establish the prognosis in early cases. The recovery rate in patients seen within six days was unexpectedly poor, as even assuming that those not traced recovered, it was no higher than 65%, or, excluding herpes zoster as well, 68%. The traditional 85% could be reached only by the most favourable interpretation of the small group seen within the first two days. The results show some effect of selection within the first two weeks, as a complete palsy in the second week has a significantly worse chance of recovery than a similar palsy observed in the first week. No conclusive evidence of the effects of selection within the first week could be obtained.

Most forms of treatment advocated for Bell's palsy are not based on satisfactory evidence. The present investigation underlines the need for a more scientific approach. A control series of "early" cases is not enough, and the comparison of patients treated on the day of onset with untreated patients first seen within two weeks of the onset, however statistically significant, is

not clinically valid. Control series in the assessment of any treatment must be matched for age, degree of paralysis, and interval since the onset within quite narrow limits.

Summary

The prognosis for complete recovery from Bell's palsy seen within six days of the onset was found to be no higher than 65%. The relatively bad prognostic significance of advancing years, a complete palsy, and herpes zoster was confirmed. The effect of selection on the prognosis is discussed, and the necessity for precisely matched control series in the assessment of treatment is emphasized.

I thank all those practitioners who referred patients with Bell's palsy and also Mr. R. L. Flett for his help with some of those in whom recovery was delayed.

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Medical Memoranda

A Condition Resembling Severe Pre-eclampsia Occurring Under Anaesthesia and Associated with Scoline Apnoea

The following case is reported in an endeavour to obtain help in the explanation of the clinical syndrome and as a record in the event of a further case report. The patient presented two interesting features—a scoline-induced apnoea due to a low serum pseudocholinesterase and severe hypertension and conjunctival oedema which could not be accurately accounted for.

CASE REPORT

A woman aged 38 attended Queen Charlotte's Hospital for her fourth pregnancy. Two of the pregnancies had resulted in spontaneous complete abortion and one pregnancy had resulted in a live birth after the spontaneous onset of premature labour. The weight of the patient at the start of the fourth pregnancy was 186 lb. (84.4 kg.), and the total subsequent gain in weight in this pregnancy was 34 lb. (15.4 kg.). The blood-pressure never exceeded 130/80 mm. Hg, and there was no proteinuria during the antenatal period; the ankles were slightly oedematous from the 28th week of gestation.

The patient was admitted to hospital at the 35th week of pregnancy with ruptured membranes, an oblique foetal lie, prolapse of the umbilical cord, and a normal foetal heart rate. The blood-pressure was 140/85, there was slight ankle oedema, and no protein in the urine. An emergency lower-segment caesarean section was performed and an infant which cried within one minute delivered.

The anaesthesia was begun by intravenous injection of atropine 1/100 gr. (0.65 mg.), thiopentone 250 mg., and scoline 75 mg., followed by endotracheal intubation. Anaesthesia was maintained by nitrous oxide and oxygen, 5 and 2 litres/minute respectively, through a circle absorber, with intermittent doses of scoline amounting to a total dose

of 120 mg. During the operation spontaneous respiration was detected and 5 mg. of tubarine was given intravenously. Ergometrine 0.5 mg. was injected intravenously immediately after delivery of the infant; at this stage of the operation a haemorrhage of 2 pints (1,140 ml.) occurred, the patient's pulse rate rose from 90 to 140 a minute, and the pulse was of poor volume. An intravenous drip of dextran in 5% glucose was started, and 20 minutes later, when the operation was complete, 750 ml. of this solution had been given.

When the caesarean section was finished the pulse rate was 140 and of good volume, although there was no sign of the spontaneous onset of respiration or the return of consciousness. A severe oedema of the conjunctivae was noted; the blood-pressure was 210/130, and the pulse rate 200; the skin was flushed and the muscle tone flaccid. A gas mixture containing 5% CO₂ was used for five minutes, nikethamide 1 ml. was injected intravenously, and 15 minutes later 1/100 gr. (0.65 mg.) of atropine followed by two injections of 1.25 mg. of neostigmine was given intravenously. The patient remained apnoeic and unconscious, and her muscles were still flaccid. A catheter specimen of urine showed a heavy cloud of protein and a trace of glucose.

One and a half hours after the operation there was some movement of the patient's trunk although no respiratory movement had yet occurred. Ten mg. of pentolinium tartrate was injected intravenously and the blood-pressure fell from 300 to 130 systolic but soon rose again to 190. At this stage the differential diagnosis appeared to be (a) severe pre-eclampsia, (b) phaeochromocytoma of the adrenal gland, (c) an abnormal reaction to dextran or scoline, and (d) a cerebrovascular accident associated with the severe hypertension. The apnoea could have resulted from the scoline or from a cerebral haemorrhage. Lumbar puncture was performed and a clear C.S.F. obtained at a pressure greater than 300 mm. H₂O.

Four hours after the operation spontaneous respiration began gradually, the conjunctival oedema diminished, and the patient became conscious. The pulse rate was 100 and the systolic blood-pressure 130. Seven hours after operation the patient felt perfectly well, the blood-pressure was 100/80, the conjunctival oedema had disappeared, and the optic fundi were normal. Examination of the central nervous system showed no abnormality. The urine appeared cloudy and microscopical examination revealed a large number of hyaline and cellular casts, red blood cells, and a few pus cells; protein was estimated as 131 mg./100 ml. Eleven hours after operation the patient had no symptoms, the pulse rate was 90, the blood-pressure 100/80, no oedema was present, and the urine was free of protein. Convalescence was uneventful.

Other investigations included: Blood urea, 33 mg./100 ml., 25 mg./100 ml. Serum electrolytes, sodium 14 and potassium 4.2 mEq/l. Repeat urine examination: occasional epithelial cells, no protein, no glucose. Throat swab: normal flora. Liver-function tests: within normal limits. Hb, 9.8 g./100 ml. Leucocytes, 11,000/c.mm. (neutrophils, 80%, lymphocytes, 14%, monocytes 6%). Film: some anisocytosis, poikilocytosis, and polychromasia. Chest x-ray picture normal. Intravenous pyelogram (3 months after delivery): normal. no soft-tissue mass in either suprarenal area. Urinary catechol amines within normal limits. Serum pseudo-cholinesterase, 11 units/100 ml. (normal 60-120).

COMMENT

The association of a low serum pseudocholinesterase with apnoea after the use of scoline supported the diagnosis of a scoline-induced apnoea. Later the patient's sister was discovered to have had a similar episode of apnoea after the use of scoline during anaesthesia for external version during pregnancy; familial occurrence of a low serum pseudocholinesterase has been reported (Kaufman *et al.*, 1960).

While the protean manifestations of pre-eclamptic toxæmia are well known, the occurrence of gross conjunctival oedema within a period of five minutes, the unusual time of onset of the signs and their severity combined with their speed of onset and subsidence would be unusual in this disease. The use of dextran suggested the possibility of a reaction to this drug, but no report of hypertension after its use can be found in the literature. The administration of intravenous ergometrine was not thought to be a causative factor in this patient.

As the duration of the hypertension and conjunctival oedema corresponded to the period of respiratory apnoea the possibility that scoline caused these signs in the patient must be considered, although normally scoline is said to produce a mild hypotension.

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A Case of Silent Antepartum Rupture of the Uterus

Practitioners are well aware of the risk of uterine rupture associated with labour after previous caesarean section, in a multiparous patient with suspected disproportion, or with a malpresentation, and such patients are usually admitted to hospital for confinement.

The following case of silent rupture of the uterus at the 34th week presented an interesting clinical problem. The patient had had no previous operations nor a history of difficult labour.

Pathognomonic clinical signs or symptoms are not constantly present in any medical or surgical problem, but when elicited they go a long way towards establishing the diagnosis. Shoulder-tip pain is one such symptom. When associated with an abdominal complaint intraperitoneal bleeding is likely, but its absence by no means rules out this possibility. The persistence and severity of shoulder pain in the present case provided the clue to the likely diagnosis.

CASE REPORT

A married woman aged 37 was admitted to hospital on February 17, 1959, complaining of vaginal bleeding and abdominal pain. She was then 34 weeks pregnant in her fifth pregnancy. Her history had been good, she had had no previous illnesses or operations, and her four children had all been born spontaneously at 40 weeks without apparent difficulty. Her last child weighed 10 lb. (4,535 g.) at birth, and she stated that her recovery from the confinement was slow. For three or four days after the delivery she experienced lower abdominal pain, and pain in the shoulders, which disappeared spontaneously. The present pregnancy had been progressing normally until the day of admission to hospital, when she woke up with backache, lower abdominal pain, and vaginal bleeding. She was admitted to hospital with the provisional diagnosis of accidental haemorrhage.

On admission in the early afternoon her general condition was fairly satisfactory. The temperature was normal, pulse