

# Medical Science Summer Project

In this pack are a set of medical notes from a traffic accident six years ago in Germany that I was involved in. (Medical notes are usually highly confidential, but I have no issues with you seeing these). The newspaper report from the accident is at the front and then there are seven pages detailing my injuries and treatment.

Have a read through of the report, and then focus on an area that you think you might like to work in in the future. For example, if you wish to become an operating theatre practitioner, the initial injuries that required surgery would be of most interest. If you are interested in physiotherapy or speech therapy, these sections would be relevant. If you want to go into an area that is not covered in the report eg midwifery, find an area that is of some interest to you.

During the summer holidays, you need to research some of the key terms from this area and produce a short powerpoint or document explaining these. For example you could find out what an epidural haematoma is, what an Unterberger stepping test is, or what dysphagia is

Bring this to the first lesson of the year. It's not a test, but it shows that you are serious about the course and prepared to put some effort in in preparation.

If you have any questions, feel free to email me at [p.guttridge@lowestoftsfc.ac.uk](mailto:p.guttridge@lowestoftsfc.ac.uk) or Simon Bowles at [s.bowles@lowestoftsfc.ac.uk](mailto:s.bowles@lowestoftsfc.ac.uk) Have a great summer and see you in September!

Paul Guttridge (Medical Science teacher/lead IV, Lowestoft Sixth Form College)



(These notes are to be signed by a Medical Officer as a true extract or copy of FMed 10/11 and, where applicable, of FMed 826/827)

25.07.2012

Copy to:  
Anita Carr, RBA, GSTT Admin Office  
Kantensiek 19 (Room 209), 33617 Bielefeld

Regarding: Mr Paul Matthew Guttridge, DOB 08.04.1971  
Danziger Str. 7, 31675 Bückeburg

Dear Colleague PD Dr. Knappe,

Thank you for kindly referring your patient Mr Guttridge, who was in our inpatient care from 21.06.2012 to 12.07.2012.

**Diagnoses:**

Traffic accident with multiple injuries on 23.05.2012 (T07)  
Severe open head injury with (S06.9)  
Subdural haematoma on the left in the temporal region (S06.5)  
Epidural haematoma on the left in the temporal region and frontobasal region on both sides (S06.4)  
Fracture of the skull on both sides in the temporal region (S02.1)  
Open frontobasal fractures on both sides, fractures of the orbital roof on both sides, cerebral contusion on both sides in the frontobasal region, condition following frontobasal duraplasty, foil covering of the orbit via bifrontal craniotomy on 01.06.2012 (S06.21)  
Complex Le Fort III mid-facial fracture, with condition following reduction of the lateral orbital fractures and the nose on 01.06.2012 (S02.4)  
Corneal opacification on both sides in the peripheral region (H17.8)  
Chest injury with serial fractures of the ribs, ribs 2-4 on the left, haemothorax and pneumothorax on the left (S22.43; S27.1)  
Fracture of the left clavicle (S42.02)  
Non-displaced fracture of the transverse process of L1 (S32.01)  
Condition following pneumonia (J15.5)

**General and clinical history:**

Family history:  
Nothing of note.

**Current symptoms and functional limitations:**

The patient was a passenger in a British car (right hand drive) which was driven into by a lorry at approximately 50 km/h. Multiple injuries resulted with the aforementioned injury profile. The patient was brought intubated and ventilated in the rescue helicopter accompanied by the emergency doctor to Johannes-Wesling-Klinikum, Minden. Intensive medicine treatment with various operative procedures on the part of the neurosurgery department and the oro-maxillo-facial surgery department was carried out there until the day of transfer on 21.06.2012. Parallel to this long-term ventilation was carried out with difficult weaning from the respirator, complicated by pneumonia.

Despite the severe injuries the patient recovered relatively well and could therefore be transferred to our hospital for the planned neurological early rehabilitation measure. At this time the patient complained of a memory gap from the time immediately before the accident until approximately 2 weeks ago. His speech is at times slowed, he has not noticed amnesic aphasia. In addition, he reports no considerable neurological deficits. He is physically exhausted relatively quickly and for example can only walk for 10 minutes without a break. Climbing stairs has not been practised to date. In addition, he has to complain of rib pains on the left in the frontal region. His wife accompanying him stated that after discontinuation of the sedation the patient had been delirious and is still very anxious.

**Medication:**

Floxal eye drops 4 x daily 1 drop in each eye  
Bepanthen ointment on both sides at night  
Mono-Embolex 3,000 subcutaneously

**Social history:**

The patient is English, married to an English woman and has three children. The couple currently live in a house. The 13-year-old daughter lives in England with friends, the two sons live in the house in England, all children go to school there. The family's actual main residence is in England. There are no relatives requiring care to be looked after. Living costs are covered by the family's own income. There is no degree of disability or reduction in earning capacity.

**Work and professional history:**

Completed teacher training in England. The patient is currently employed as a biology teacher at a secondary school (grammar school). This is a full-time occupation, 08:00–16:00 hours. The route to the place of work is reached by bicycle or alternatively by car. There has currently been continuous unfitness for work since the accident, 23.05.2012:

**Findings on admission, previous findings, supplementary investigations:**

41-year-old patient in good general condition and slightly reduced nutritional condition. On the left in the thoracic region there is a former access of the chest drain, approximately 1.5 cm in width, with gaping wound and serous secretion. On the right below the costal margin in the region of the flank there is a dry and irritation-free wound, approximately 1 cm in width. Over both lungs vesicular breath sounds, resonant percussion sound, no dyspnoea at rest. Heart sounds clear, rhythm regular, heart rate 78/min, blood pressure 130/90 mmHg. Peripheral arterial pulses equally strongly palpable on both sides. No varicosis, no oedema.

Abdominal wall soft, slender with normal findings on palpation. Bowel sounds normal, liver and spleen not palpably enlarged. Renal beds free of pain on percussion on both sides.

Neurological findings:

The patient is right-handed. Scar, approximately 20 cm in length, free of irritation, running coronal from ear to ear, with good capacity for movement. On the right in the frontal region there is a wound, approximately 4 cm in length, with suture material in situ. No meningism, no pain on percussion on the cranial vault, nerve exit points clear.

Cranial nerves:

Pupils round, equal, medium wide with reaction to light and convergence equal on both sides. No Horner's syndrome, no ptosis, visual field normal on finger perimetry. No nystagmus, congenital divergent strabismus on the right. Vision subjectively not impaired. Hypoaesthesia on the right in the frontal region and along the scar. No paresis of the musculature innervated by the facial nerve. Hearing and smell subjectively not impaired. The soft palate lifts symmetrically on phonation. Articulation clear. Swallowing undisturbed. No pareses or atrophy of the trapezius muscle or the sternocleidomastoid muscle. The tongue deviates discretely towards the right on being stuck out.

Motoricity:

Arm drift test and leg drift test equal on both sides and normal. On testing basic strength slight right-sided paresis is shown. With regard to the right arm strength grade 4/5 for elbow flexors and extensors, hand strength 3-4/5 according to Janda. Hip flexors, knee extensors and flexors as well as foot dorsiflexors in each case strength grade 4-5/5 according to Janda. Musculature eutonic to flaccid, no atrophy.

Reflexes:

Proprioceptive reflexes in the arms and legs can be triggered on the right as lively and on the left as moderately lively. The abdominal reflexes are equal on both sides and moderately lively. Pathological reflexes or clonic spasms cannot be provoked.

Co-ordination:

Relatively symmetrical, although slowed gait pattern on level ground. Walking blindfold and walking along a line are demonstrated unsteadily with balancing. Romberg's standing test and Unterberger's stepping test normal. Standing on one foot unsteady on the right, normal on the left. Walking on toes and heels possible and equal on both sides. Finger-nose test and knee-heel test: dysmetria on the right, bradydiadochokinesis on the right, left side normal.

Sensation:

With the exception of the sensory deficits on the head there are no impediments with regard to pressure, touch, pain, positional sense, temperature and vibration.

Psychological findings:

Alert patient, definitely fully oriented. Behaviour in contact friendly, reserved. Rapport in mother tongue fluent, the patient still speaks broken German. There is probably no aphasia. Anxious basic attitude with uncertainty due to the foreign

environment. Mood euthymic, ability to adapt emotionally intact, no suicidal tendency.

Previous findings:

A specialist consultative ophthalmological report dated 20.06.2012 is available to us for viewing, as is the detailed medical discharge report from the neurosurgical department of Johannes-Wesling-Klinikum, Minden about the inpatient stay from 23.05. 2012--21.06.2012.

Diagnostic measures of Klinik am Rosengarten:

Laboratory findings:

22.06.2012 (29.06.2012): gamma GT 231 (125) U/l, cholesterol 223 mg/dl, CRP 1.2 mg/l. All other laboratory chemical parameters measured here were normal.

EEG on 25.06.2012:

Basal rhythm 7-9 Hz, visual blocking reaction good. Assessment: Normal alpha EEG with good basal activity in average voltage with no difference between sides or signs of increase in cerebral excitability.

ECG on 22.06.2012:

Sinus rhythm, no axis deviation, heart rate 75/min, normal cardiac conduction activity.

Final neurolinguistic report

The patient is also be examined by a speech therapist on the day of arrival in order to be able to rule out dysphagia.

With regard to the structures relevant to swallowing there are neither motor deficits nor sensory deficits. Subjectively no symptoms whatsoever are described on eating. The observation of eating as well as the water swallowing test according to Daniels remain normal. The reflexes start quickly. Dysphagia can be ruled out. Only the food plan is subsequently discussed with the patient and partially translated.

Investigations:

In the discussion regarding the patient's history the patient reports that he "would sometimes think faster than speak". With the exception of this, no speech systematic or speech motor limitations were described.

The neurolinguistic investigations show no significant indication of the presence of aphasia.

Spontaneous speech is slightly abnormal overall. Speech flow is slightly slowed and occasional amnesic aphasia is to be observed. There are no further speech pathological symptoms, phonemic paraphasia occurs on only two occasions.

The Boston Naming Test (BNT) is completed with 0 errors, there are no hesitations in word recall to be observed.

The extended examination of word finding performance on the basis of a screening

procedure showed slight indications of very slight amnesic aphasia. Category and synonym development do not present any problems. In comparison, in partial exercises for word generation a slight delay in word recall is shown. The formation of definitions is also slightly delayed at times.

Deficits are not to be established either in reading and writing or in auditory speech comprehension in the investigations. Text comprehension is also normal (an article from the New York Times was used for the examination).

For stabilisation of speech-cognitive functions low frequency treatment was carried out. In this complex linguistic tasks, such as for example hyponym formation, formulation of definitions or forming of definitions were carried out.

#### Summary:

In conclusion occasional amnesic aphasia is still noticeable in spontaneous speech. However, it is not to be ruled out that this impression is misleading, as the patient possibly out of politeness attempted to adapt his linguistic level to the English knowledge of the therapist. A slowing is no longer to be established. There is excellent progress of remission. In the test psychology no speech systematic errors can be recorded. The patient's capacity for communication is not impaired, the same applies for his capacity for articulation.

Nevertheless, because of the patient's age and his professional occupation as a teacher, which amongst others makes high demands on linguistic competence, a consultation with a British speech therapist is to be recommended as a precaution.

#### Neuropsychological concluding report

The patient presented in the Department of Neuropsychology on 27.06.2012.

#### Patient's reports

In the initial discussion he complained of no cognitive deficits whatsoever.

#### Psychological condition

The patient was definitely oriented with regard to person, time and place. In contact he was shown to be friendly and open, no indications of simulation or aggravation. The neuropsychological examination showed the following performance profile:

#### Intelligence (SPM)

Examination of non-verbal intellectual performance capacity and logical conclusive thought showed average results with 94 points.

#### Visuoconstruction (Rey Complex Figure)

Drawing a complex, two-dimensional figure was successful with no indications of disturbances of visuoconstruction, perception of planning capacity.

#### Attention (alertness, flexibility, divided attention, cognitrone S1, line following test)

The simple reaction times were on average fast (PR 66); the patient could not increase his attention level in response to a warning stimulus (with warning sound

PR 38), therefore the specific value of phasic alertness is borderline (PR 16). The rapid change of the focus of attention (cognitive flexibility) succeeded above average (speed PR 73, care PR > 86). In the test of attention division a performance appropriate for the norm was shown (speed PR 69/PR 31, 1 omission PR 50, 0 errors PR 76). In a performance test to capture concentration and attentiveness on the basis of a complex visual pattern analysis the patient worked at average speed (average time hits PR 21, average time rejection PR 33) with above average accuracy (hits PR 88, rejection PR 84). Targeted visual orientation succeeded well on average (PR 81).

**Memory (Wechsler Memory Scale Revised, Auditory Verbal Learning Test)**  
Immediate memory span was shown to be above average (PR 94), the working memory was far above average (PR > 99). Verbal learning capacity for unstructured material was shown to be above average in all areas: 12 / 11 / 14 / 15 / 15 // 9 / 15 // 14 - PR 95. The assessments in detail were as follows: immediate memory span PR 100, learning performance PR < 80, total learning performance PR 95, recall performance interference list PR 90, recall performance after interference PR > 95, recall performance after time delay PR 80-85.

#### Executive functions (SPM)

Capacity for logical conclusive thinking was shown to be above average.

#### Summary

In all areas tested the patient showed at least average, in broad sections above average performances. Neuropsychological treatment is not required.

#### Treatment, progress and course of action:

We integrated the patient in a multimodal treatment concept. The main focus was on physiotherapeutic individual treatment on a neurophysiological basis, occupational therapy and speech therapy treatment. In addition, neuropsychological treatment was carried out.

The patient regularly participated in the treatments prescribed by us and achieved a very good treatment result. The patient intermittently complained of left-sided chest pains, which were dependent on respiration and pressure, therefore a chest X-ray image was taken of the left side of the chest. A fracture of the ribs could not be visualised. The patient could be mobilised free of problems.

At the conclusion of the treatment, with problem-free mobilisation, slightly limited stamina was shown, therefore for improvement of the functional limitations still present at the end of the range of movement with regard to the locomotor and postural system we recommended physiotherapy on an outpatient basis and speech therapy in the patient's mother tongue for exclusion of the minimal limitations which still existed.

At his own request (the patient will change his place of residence soon and return to England) we discharged the patient into further general practitioner's care.

#### Medication:

Floxal eye drops 4 x daily

Bepanthen eye drops as required at night

Yours sincerely,

Dr. Dr. med. Wehking  
Senior Consultant - Neurology  
Specialist in Neurology  
Specialist in Physical and Rehabilitative Medicine  
*[signed]*

Bernd Lippik  
Ward Doctor  
*[signed]*