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Contents

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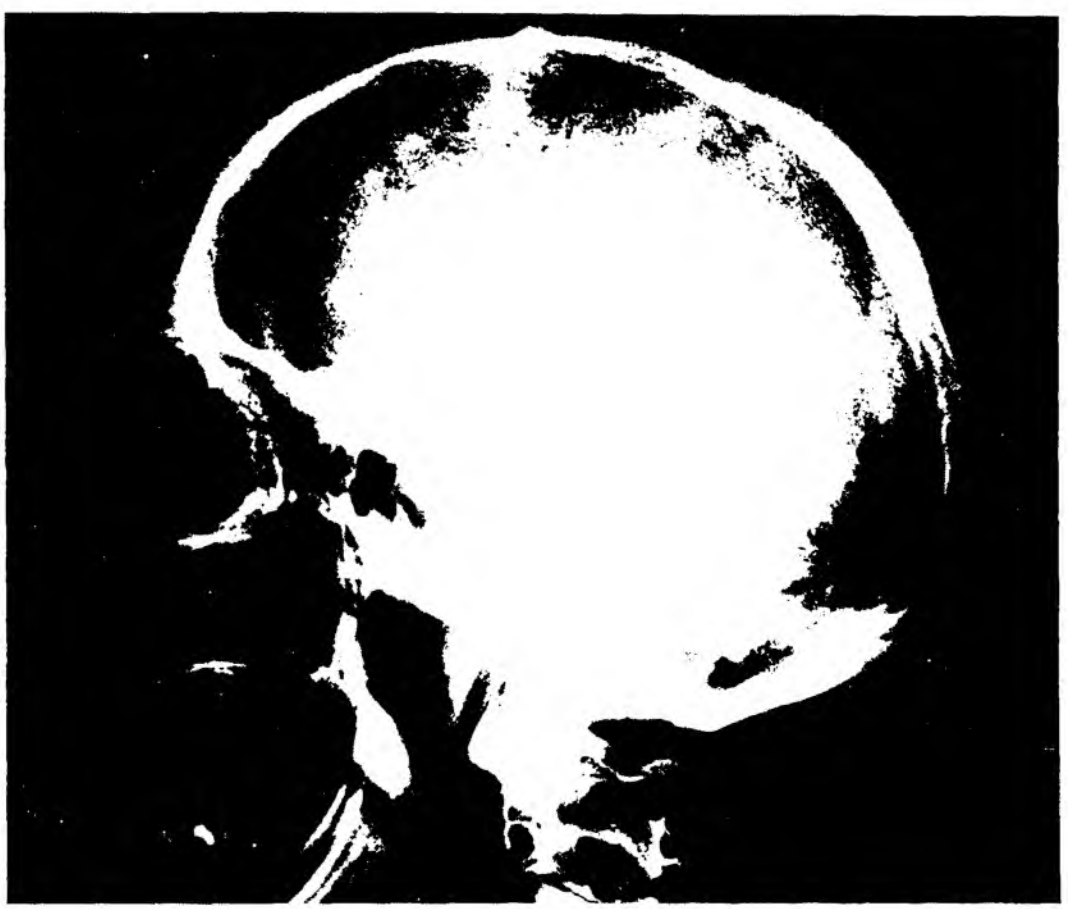

Severe Head Injury

The key to becoming a good doctor is acquiring a solid foundation in the skills of listening to and examining patients.

The importance of a thorough grounding in these skills had been recognized and prompted the current revision of the phase II course, the objective being to improve the introduction to clinical studies. The major change is the establishment of a one-month introductory clinical skills course, which, by a series of lectures and practical sessions, aims to provide a gradual and structured introduction to clinical methodology. Apart from administrative difficulties the introductory course has proved to be a success, forming an excellent framework to affix clinical skills acquired in later attachments in medicine and surgery.

Yet the benefits gained from the introductory course may be partly negated by the loss of one of the two phase II medicine attachments so that community medicine could be brought forward by a year.

There are many in phase II who still lack the confidence and experience to conduct a full clerking, to perform a venesection or insert a venflon, all essential skills required prior to entry into phase III. The additional medicine attachment would have done much to allow consolidation of these skills.

However, no easy solution presents itself. Demanding an expansion of one course inevitably means an equivalent reduction in another, a consequence of a curricular structure which does not allow easy modification. Perhaps a more radical reorganisation of the clinical phases is required, rather than continuing the revisionary approach which merely serves to perpetuate the overcrowding of an already overcrowded course.

Cover illustration of a normal skull X-ray was reproduced with the assistance of the Department of Pathology, University of Edinburgh.

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Res Medica is the Journal of the Royal Medical Society of Edinburgh.

Royal Medical Society, 5/5 Bristo Square Edinburgh EH8 9AL.

The Consequences of Severe Head Injury

Dr Brian Pentland

Severe head injury is a common problem, usually due to road traffic accidents, accounting for an estimated 400 hospital admissions each year in Scotland. This paper describes the mechanisms, effects and management of such injury.

Since early caveman courted the object of his desire by clubbing her, traumatic brain injury (TBI) has been a common problem. Nowadays the male of the species is more likely to be the victim receiving the trauma during sexual display at the wheel of a car or in conflict with a rival. Such acts of youthful bravado, often assisted by alcohol, can have life-long consequences not only for the individual but for his family. Rehabilitation of people after TBI is one of the most exciting challenges in modern medicine. Few conditions provide such a variety and complexity of disabilities to address in close collaboration with a team of skilled colleagues from a range of professions.

The Size of the Problem

TBI accounts for about 300 hospital admissions per 100,000 of the population each year. Fortunately the great majority of these people will have suffered relatively minor injuries and will be allowed home within a few days with no significant after effects. Some of these minor injuries will however subsequently be discovered to have problems which do affect their lives adversely. It is estimated that of the 300 there will be 18 with moderate and 8 with severe injuries. The classification of TBI into different categories of severity is rather loosely based on such variables as depth of coma (usually measured using the Glasgow Coma Scale [GCS]. See Table I)[1], length of unconsciousness (unconsciousness being GCS of 9 or less) and duration of post-traumatic amnesia (PTA). Table II summarises one such classification.

Although falls account for the majority of all head injuries admitted to hospital, road traffic accidents are responsible for about two-thirds of severe injuries.

The Nature of TBI

The mechanism(s) of injury depend on the nature, direction and size of the forces applied to the brain. These forces may be classified as CONTACT or ACCELERATION phenomena. Thus when a blow is struck which bends or fractures the skull it

Dr Brian Pentland is a consultant neurologist at the Rehabilitation Medicine Unit, Astley Ainslie Hospital, University of Edinburgh.

Table I Glasgow Coma Scale

Eye Opening (E)	**Score**
Spontaneous	4
To speech	3
To pain	2
Nil	1
Best Motor Response (M)	
Obeys command	6
Localizes pain	5
Normal flexion	4
Abnormal flexion to pain	3
Extension to pain	2
No response	1
Best Verbal Response (V)	
Orientated, normal speech	5
Confused, normal speech	4
Inappropriate speech/words	3
Incomprehensible sounds	2
Nil	1

Coma Score=E+M+V

Minimum = 3 Maximum=15

can lead to contact damage in the form of underlying contusion of the brain. Acceleration forces cause deformations described as tensile (pulling apart), compressive (pushing together) and shear strains (parallel deforming forces). In acceleration mechanisms it is probably the speed of displacement of the brain relative to the skull which is the most crucial factor.

The damage resulting from these forces of primary impact may be one or all of the following: (l) FOCAL, (2) POLAR or (3) DIFFUSE AXONAL INJURY (DAI). Focal damage refers to localised areas of contusion, laceration or haematoma; polar damage to the injury to frontal, temporal and occipital poles resulting from the brain impacting against the inner walls of the skull; and DAI describes the effects of shear and tensile strains on axons.

Apart from these primary types of damage secondary insults occur to the brain both systemically and locally. It is estimated that 16% of cases of TBI have an additional major extracranial injury. These may be responsible for severe blood loss, interference with respiration or metabolic disturbances which impair the oxygen and energy supply to the brain with resulting further damage. Local secondary insults include such things as the effects of haematomas pushing and compressing areas of the brain, meningitis and vasospasm.

These various mechanisms of damage have widespread effects on brain function which explains why the consequences of TBI are very variable and unpredictable. Modern scanning techniques with CT and MRI imaging identify major lesions, particularly life-threatening complications such as haematomas and hydrocephalus, but cannot be relied on to exclude more diffuse lesions such as DAI or some of the hypoxic-ischaemic phenomena of secondary insults.

Principles of Rehabilitation

Rehabilitation is, in essence, the management of the results of injury or disease. Its components consist of identifying the dysfunctions, planning and executing strategies to deal with them, and reviewing and adjust-

Table II Classification of severity of Traumatic Brain Injury (TBI)

Severity of Injury	GCS	Coma Duration	PTA
Minor	13-15	<15 mins	<1 hr
Moderate	9-12	15 mins-6 hr	1-24 hrs
Severe	3-8	>6 hrs	>24 hrs

ing any intervention according to the results. In dealing with the acute life threatening crises that can occur in the initial phases, the trauma or neurosurgical team apply these same principles with the aim of promoting maximal recovery and preventing avoidable complications. They also institute rehabilitation as they have to address the wider issues involved in recovery from TBI. Formal rehabilitation which may take place in another unit is a continuation of this process rather than a separate treatment and at most may represent a shift in focus after the life has been saved. Apart from a brief description of coma rehabilitation, discussion will concentrate on the problems encountered once the individual is medically stable.

Coma Arousal

A small proportion of people remain in coma for a prolonged period after initial resuscitation and neurosurgical treatment and attempts are made to wake them from the state of unconsciousness using a 'coma arousal programme'. Sensory and sensorimotor stimuli including touch, taste, smell, hearing, vision and movement are applied in a graded manner with careful attention to timing, duration and reinforcement. Thus for example visual stimuli may start with short exposure to flashing light, move through the use of bright colours or moving objects to showing them pictures and photographs depending on response. These techniques are far from proven in terms of promoting recovery and need scientific study. They do help by providing the opportunity for close relatives to feel involved in the care of the patient, at a time when they are beset by mind-numbing feelings of impotence, as they can get involved in obtaining the stimulants and administering them under direction.

Assessment of Dysfunctions

Once the patient is awake and medically stable the task of comprehensive assessment of their dysfunction can start in earnest. Because of the diffuse nature of the damage which may have occurred various areas of function must be checked and a number of different professionals are needed to do this properly. The major areas of function are: mental, communication and neurological. In addition the individual's independence in performing activities of daily living (ADL) has to be determined and social issues such as housing, vocational and recreational needs have to be explored.

To detail all possible disorders would require several issues of this journal or tedious lists covering most of the ailments that flesh in heir to. Only some common examples are given.

Mental Consequences

Memory impairment and disorientation were found in over three-quarters of patients seen in the Astley Ainslie rehabilitation unit. Memory is essential for learning and much of rehabilitation involves relearning old skills or acquiring new ones so that often many hours of patient, repetitive work is needed. Disorientation can be associated with a tendency to wander off or even get lost within the confines of a ward. Other individuals have very limited attention span or are markedly apathetic and lethargic. Such dysfunctions are generally labelled as cognitive function and the expertise of the clinical psychologist, occupational therapist and others in the team are called upon to accurately identify the nature of the difficulty and advise on strategies to deal with them.

Personality change is one of the most frequently noted features described by families. Not having had the opportunity to know the person before the injury the team has to rely on family, friends, school, employment or even police records to gauge what change if any has occurred. It should be remembered that although people from all walks of life sustain head injuries, those from the lower echelons of society are over-represented. In some series about one in five have had a criminal history. On some occasions personalities change for the better but unfortunately the reverse is more common. The sensitive and thoughtful husband may be transformed into a rather brutish and ill-tempered individual who rejects his wife's affection; the bright and likeable sports enthusiast become a lethargic, humourless laggard. Behavioural change may be marked and very difficult to manage in the hospital environment if it includes severe aggressive or noisy components. Such cases may require specialist psychiatric/psychological management using behavioural management techniques.

In addition to cognitive and behavioural changes, TBI victims often have changes of affect with severe depression, anxiety or emotional lability where they vacillate between tears and laughter.

Communication Difficulties

Dysphasia, dysarthria and dysphonia are all common after head injury either as a result of focal or diffuse damage. Indeed any disorder of speech or language can occur and difficulties with communication may result from cognitive, emotional or behavioural disorders. Expert assessment of just what the nature of the disturbance is in an individual is a necessary pre-requisite to doing something about it

Neurological Consequences

The neurological evaluation of a TBI patient is essentially the same as the standard neurological examination. Neurological diagnosis is sometimes divided into locating the site of the lesion(s), determining the general pathology and then the specific pathological nature of the damage. The first of these is of paramount importance in TBI cases. Work-up includes testing higher cortical function, assessing speech, checking cranial nerves, examining motor, sensory and reflex function and investigating stance and gait. Obviously this overlaps with some of the factors already discussed and described below under activities of daily living later. The physiotherapist in rehabilitation is usually particularly expert in accurate evaluation of motor function and mobility.

Table III Help needed with Activities of Daily Living (ADL) in 100 Traumatic Brain Injury (TBI) patients

Activities of Daily Living	Number needing help
Feeding	45
Personal hygiene/grooming	48
Dressing	57
Bathing	71
Bowel continence	33
Bladder continence	54
Use of toilet	54
Mobility	71

The variety of disturbed neurological function seen in this population is vast. So much so that in comparison with some other conditions TBI is often considered 'messy' and 'untidy'. The same patient may have evidence of cerebral, cerebellar and brain stem or upper spinal cord disorder. It is worth noting that head injury is one of the few causes of loss or impairment of smell, it can cause bizarre disturbances of vision, epilepsy with complex partial seizures and complex dyspraxias to name but a few examples.

Activities of Daily Living

The clinical signs familiar to doctors represent impairments but their real importance to the patient is how these disturb function or result in disabilities. The effect on the individual's ability to look after himself is particularly pertinent. Activities of daily living (ADL) describes the everyday things we all do for ourselves. In the study of 100 cases of TBI[2] the number of patients needing help with different tasks is shown in Table III.

Housing

Severe physical disability can have major repercussions on the accommodation needs of patients. The most obvious example would be the person who becomes dependent on a wheelchair for mobility. If such an individual lives in an upstairs flat a change of house may be necessary. Others may need a lift installed in their home or a toilet put in downstairs. Some who have no family home to return to may need to be placed in sheltered accommodation where a warden or other responsible adult can provide some supervision.

Vocational and Recreational

The person who survives a serious head injury, with few exceptions such as those classified as in the 'persistent vegetative state', is likely to have a normal life expectancy. In other words most have 40-50 years ahead of them. They are entitled to expect opportunities in terms of employment and pursuit of leisure just like any other citizen. Because of their disabilities, particularly

those connected with mental function, their vocational placement may be difficult and special provision should be made to train them and place them in employment. Sadly the services available for this purpose are severely limited.

Particularly when work is not available, but in all cases the ability to participate in sporting activities or indulge in hobbies or other interests is vital. To facilitate this consideration must be given to access for the physically disabled to public facilities. There also needs to be opportunities for the mentally impaired person to attend classes or receive guidance in the use of their leisure time to enhance the quality of their life.

Conclusions

The effects of TBI can be profound and it is families which suffer the consequences. The cost in terms of human misery can be staggering. In the United Kingdom provision from Health, Social Services, Educational and Employment Services are woefully inadequate[3] and, sadly, despite authoritative recommendations to improve the situation regularly appearing in the last 50 years, little progress has been made. Specialised rehabilitation units are beginning to appear in some parts of the country but no coordinated plan to provide the necessary network of services exists.

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THE DRIFE DIARIES

Artwork by Donald Davidson

As readers will be aware, Teviot Row is alive with rumours that an ex-Edinburgh medical student is threatening to publish the diaries he kept during his undergraduate days in the "Swinging Sixties". His former colleagues, now distinguished medical men, are said to have offered large sums as "hush money" to "Doctor X", and several Edinburgh Publishing Houses have experienced burglaries and arson attacks, as well as telephone calls hinting at complications should the publisher ever need medical treatment. Undaunted, in what must be journalism's coup of the decade, ***Res Medica*** *has secured exclusive rights to these manuscripts, and after consultation with our lawyers (who advise us that their authorship must remain a closely guarded secret) we now present the final instalment of the first extracts from* ***The Drife Diaries****. Previous issues available from the RMS office.*

JUNE 20th

Got up. Had breakfast. The cornflakes last a lot longer now. The Hulk spends so much time in Spottiswoode Road. Also we get to read his *Times* in the morning. Am now big fan of Bernard Levin, the world's greatest newspaper columnist. People say they detect his influence in my final Election Pamphlet.

In the ordinary run of events, though I must confess that for me events seldom if ever run in an ordinary way, and indeed I suppose that when one looks closely at the events in any person's life an ordinary run is probably the exception rather than the rule, all of which has the salutory effect of making my opening phrase a contradiction in terms, I should be reluctant to return to a subject, however fascinating, outrageous, provocative, hilarious or, to use a much-debased word in its original sense, important, that I had already discussed a few days ago. But the matter I wish to lay before you is so fundamental to the well-being of every man, woman and child, nay every dog, cat and monkey in this venerated if not venerable medical school of ours that I make no apology for again attempting to draw my readers' attention to it, for I am referring to an impending event which future generations may come to regard as the fulcrum on which our tired civilisation swung either downwards to everlasting perdition or, and I am not yet so cynical as to dismiss this second possibility without serious consideration, upwards out of the abyss over which our species is suspended. Anyone who has not been entombed in a soundproof vault for the last three months [*Ed - Hmm more like a year - sorry*] will by now have realised that my subject is the Homeric battle being waged over

Nothing upset Mr Paeditrician ... not even when his little patients swung on his tie shouting "Me Tarzan!"

the office of Moderator Ludorum Laetitiarumque, a struggle between good and evil; between right and wrong; between light and darkness; between truth and falsehood; between hope and desperation; between me and Andrew Burton.

For there is a small faction within this university which is dedicated to the overthrow of democracy, a grim, hard-faced faction to which the very words "ludorum" and "laetitiarum" mean

Unfortunately, the rules of the election give each candidate only 300 words for his final election address, but I reckon that should impress the plebs.

JUNE 25th

Stayed in bed. Didn't feel like breakfast after last night's fiasco. Should have pandered to the masses like that clown Burton. Must practise a style more appropriate to the electorate. What about that very successful chap Hargreaves?

Mr Student was excited. He was so excited he almost missed the ward-round. That made Mr Paediatrician very angry. Usually Mr Paediatrician was calm. Nothing upset Mr Paediatrician. Not even when his little patients made his shirt all wet. Not even when his little patients swung on his tie shouting "Me Tarzan!" Mr Paediatrician loved his little patients. But he did not love Mr Student. Oh, no! When Mr Student arrived halfway through the ward-round Mr Paediatrician looked at him very hard. "How kind of you to turn up," he said. "I'm touched." But he did not look touched. Oh, no! Then Mr Paediatrician started asking Mr Student questions. Very difficult questions. Poor Mr Student! He did not know the answers! He did not know about dysgammaglobulinaemia! He did not know about the Waterhouse-Friedrichson syndrome! He did not know about the cerebral sclerosis of Pelizaeus-Merzbacher! In fact Mr Student did not know anything at all! Mr Paediatrician grew angrier and angrier. "You are a great hairy moron!" he told Mr Student. "Write out one hundred times, 'I must know the difference between glossoptosis and glomerulosclerosis'." And he made Mr Student stand in the corner all day!

By the evening Mr Student was not excited any more. He was sad. He was sadder than he had ever been in his life. Mr Student had missed his supper. He was hungry. As well as sad. And tonight of all nights! Tonight was election night. Mr Student thought to himself, "Nobody will want to elect a sad person like me". And the more he thought this, the sadder he got. So Mr Student decided to try and cheer himself up. He went to Mr McEwan's. For a quick one. And another quick one. And another. And a magical thing happened. Mr Student slowly turned into Mr Happy! Mr Happy smiled a great big smile. He decided to have a quick one too! And another! And then Mr Happy had a thought. "Time for the election!" he thought. And off he went.

The election was held in a big room. With a big chair. Mr Presdent sat in the big chair. Mr President was very important. And he knew it. He banged the table with a bone. A leg bone. Mr Happy thought of the man whose leg bone it was.

Mr Happy was going to have to nip out for a minute. He stood up. He fell down. He got up. He fell over again.

Trying to walk around with no bone in his leg. And Mr Happy began to giggle. He giggled and giggled. He giggled and giggled and giggled. Mr President looked at Mr Happy. Mr Happy tried to stop giggling. He turned red. Then he turned purple. But he managed to stop giggling. Just.

Mr President asked Mr Secretary to read the minutes. They were very long minutes. Mr Happy began to fidget. He was feeling uncomfortable. More and more uncomfortable. Mr Happy crossed his legs. Mr Secretary kept on reading. Mr Andrex raised a point of order. "O God!" said Mr Happy. He crossed his legs

the other way. But it didn't help. Mr Happy was going to have to nip out for a minute. He stood up. He fell over. He got up. He fell over again. His friends were amazed! More magic! Mr Happy had turned into Mr Topsy-Turvy! His friends laughed! His friends whistled! His friends fell off their chairs and drummed their heels on the carpet! What a good time they were having!

Everyone agreed it was the best election they ever had. Everyone except Mr Topsy-turvy. He didn't know anything about it. Mr Topsy-turvy had done a Very Big Wee-Wee and then fallen fast asleep! By the time he woke up the magic had worn off, and he was Mr Student again. And everyone had gone home. Poor Mr Student!

SEPTEMBER 17th

Breakfast in bed! Great things, electives in Kirkcaldy. The natives here speak some strange language and read nothing but ethnic novels.

Sunset o'er the Lang Toun is aye bonnie, with the reek o' the lums gangin' slowly heavenwards frae the corbie-stane gables. But yestreen, on the hill abune the toun, wi' the distant piping o' the whaups and peewits and the laverocks pouring their wee bitty sang o'er the ripening corn, 'twas a true Celtic twilight. The silver firth gleamed in the blude-red sun like a fallen claymore on the green plaid of the fields. As I hied me o'er the heather the memories o' the bygane year swirled around me like October mists. Och, but now I should be looking forward through the gloaming to the future. Was it the second sight I had? Else how was it I kent - and firm as the Aberdeen granite was my kenning - that Nev would one day return to his native heath as a consultant? That braw Tony's destiny was a group practice on the distant South Coast o' England, and that the muckle Hulk would soon become a psychiatrist in Australia? As for yon Andrex, aye, his becoming Moderator Ludorum Laetitiarumque was but the first step in a brilliant medicopolitical career that might yet lead to his achieving the secretaryship of a BMA Division. And what of his glaikit friends, Broncho, Gertrude the Gorilla and Slit-Mouth Charlie? What would become of them? As I sat amid the bracken, gazing o'er the firth at the shadows deepening on the Lammermuirs, and slipping my brawny arm round the yielding waist of Nurse O'Reilly, I thought, "Who cares?" [*Ed -we do!*]

For reasons of security Dr.Drife has moved to... Having established communication links (pigeon-post) we hope to persuade him to disclose more, though we appreciate that this is at some risk to his livelihood. So watch this space!

Upcoming Events

Wed 22 April	Dissertation by Mr. David Miles
Wed 29 April	Joint Meeting with the Medical Protection Society
Wed 6 May	Annual Extraordinary General Meeting.
Friday 29 May	President's Valedictory Address.

Council

Senior President	Donald Macarthur
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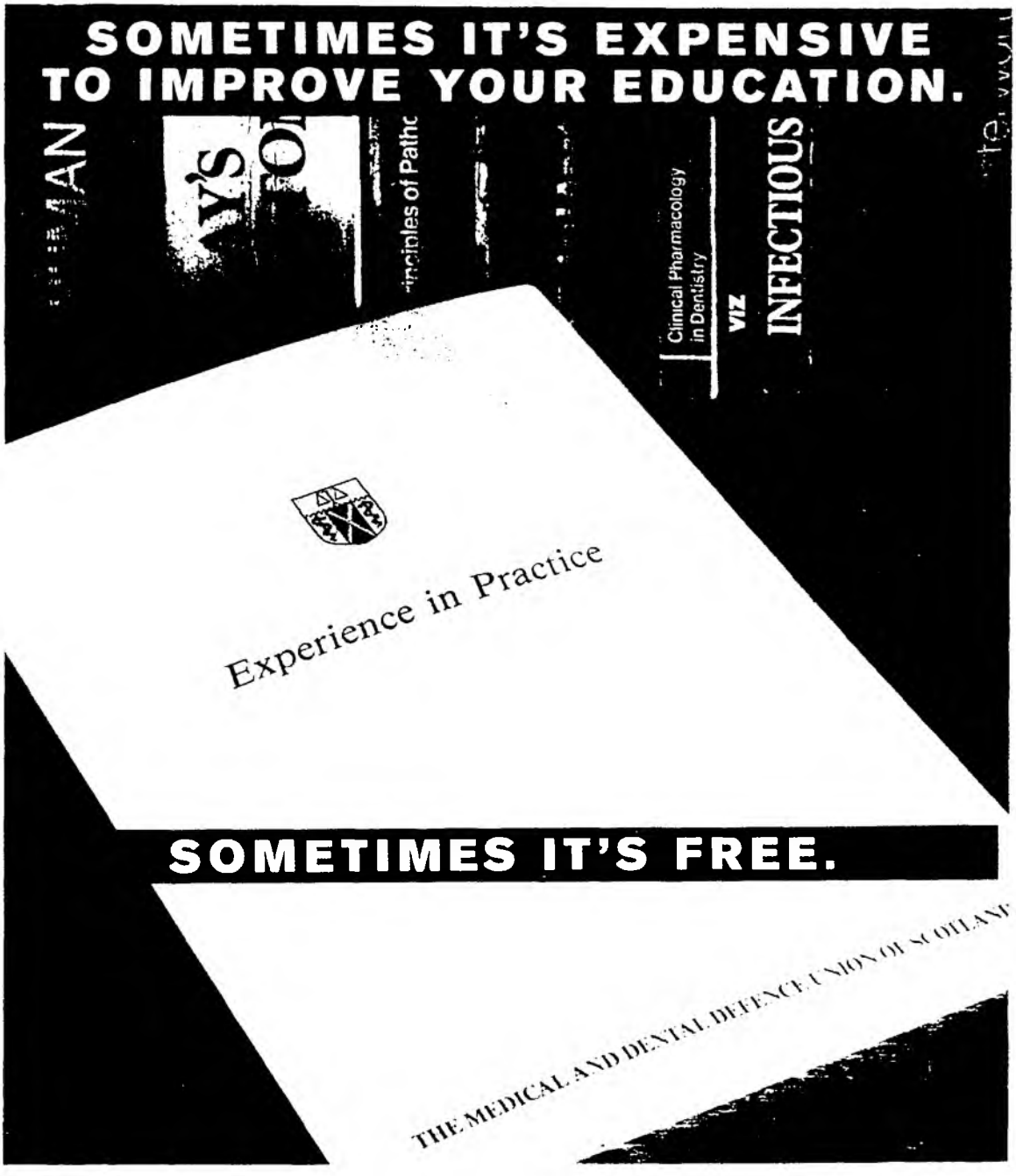

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The Medical and Dental Defence Union of Scotland

EXPERIENCE IN PRACTICE

The Loneliest GP

Tristan da Cunha, the lonely island with the exotic name, forms the setting for Dr Digby Thomas' reflective and retrospective look at his time 'castaway' in the South Atlantic

Tristan da Cunha is the most remote permanently-inhabited place on the planet. Easter Island in the Pacific, the runner-up, has a long runway bringing two jetloads of tourists each week; Tristan, having no airstrip, is reached from Cape Town after five or six days at sea with up to three months between sailings and there is little casual tourism.

The island population is about 300 including a few British and South African expatriates. The development of this community over the past 175 years is unique and its bearing on subsequent attitudes to life and health suffiently important to warrant discussion.

Tristan da Cunha is a volcanic island about one million years old and was named after its Portuguese discoverer in 1506. It is conical in aspect, less than seven miles across and rising to 6760 feet at the central volcanic peak. There are a few habitable low-lying plateaux at the coast. The island lies in the South Atlantic 1800 miles west of Cape Town and 1320 miles south of St Helena, the two nearest centres of population.

There were isolated landings in the 17th and 18th centuries but the first attempt at settlement was by an American in 1811 who recognised the potential of the island as a replenishment stop.

In 1816 the British landed a garrison on Tristan and formally annexed the island. This exercise was doomed to logistical failure and the garrison was withdrawn the following year. At their request, three men were granted permission to stay.

During the 19th century more men elected to stay on the island and women from Europe and St Helena came to marry and settle. The fertile volcanic soil supported good crops and plenty of livestock which, along with fresh water, were bartered with passing ships for other goods.

'Thriving' is probably not the word to describe the island's fortunes, for there were bad spells with poor crops and few ships, but the extended crofting existence and barter economy allowed the population to grow to 100 by 1856.

With the advent of steam shipping, fewer ships visited because Tristan is not on any modern shipping route. Between 1909 to 1920 there were no ships at all; eleven years without news, imported foods or luxuries. The privation of the late 19th and early 20th centuries lead to emigration and the population had fallen to 61 by 1903.

There were two periods of closer contact with the outside world that brought profound change to the islanders' ways of life and thinking.

The first was from 1942 to 1945 when the Royal Navy arrived to set up and man a radio and weather station. For the first time, money was introduced to the island and the islanders realised that their labour and produce had a monetary value.

In 1961 a side-vent of the volcano erupted, threatening the village and the entire population of 295 was evacuated to the UK.

By today's standards, the Tristan people were treated in a fairly patronising manner as curiosities and there was little assimilation with British culture.

If the 1940's had brought some realisation of the financial values of island life then the 60's brought home the recognition of its own cultural worth. Perhaps the culture shock in the Britain of 1961 shattered too many illusions. Perhaps fear of exploitation or loss of identity or feelings of vulnerability, inferiority or sheer incompatibility compounded their homesickness.

Only five adults out of 153 chose to remain in the UK. A more eloquent snub of western society could not have been voiced. Eventually, a reluctant British government was shamed into arranging their repatriation and the subsequent re-establishment of administration on the island in late 1963.

Tristan 1991

Today the island is a British Dependent Territory. Tristan has a British administrator and eleven elected islanders. The main source of revenue is the crayfishing franchise and philatelic sales.

The islanders are proudly British and the Union flag is flown at every opportunity. A Victorian dilectic English is spoken that seems to have cockney, west country and American flavours.

The 300 islanders live in about 100 households. The older houses are built from lava blocks while newer buildings use concrete. While the men earn money, catch fish and tend livestock, the women keep house, cook, help grow vegetables and knit prodigiously.

Family and friends will gather for particular tasks e.g re-roofing someone's house in a long cycle of reciprocated favours; the co-operative traditions remain strong.

The village has a post office, general store, hospital, village hall, libraries, pub, cafe and school. There is an Anglican church and a small Roman Catholic church. Sundays are still regarded as days of rest, times to relax and visit family and friends. The standard and style of living resembles that of a similar-sized Scottish island, while involving more self-sufficiency and less money.

The island of Tristan da Cunha from the air

The climate is temperate, with warmer summers and milder winters than that of the UK. Humidity is high, cloud and rain frequent year-round.

The Hospital

The present hospital was completed in 1971 and designed and equipped to better than UK cottage hospital standards. It comprises two parallel wings linked by a central foyer-cum-waiting room.

One wing contains a dental surgery with laboratory, two small wards with three beds in total and a two-bedded maternity ward with incubator.

The waiting room walls carried several educational posters which were rotated and replaced frequently to coincide with whatever health campaign was being organised.

The other hospital wing contains a treatment room with instrument and dressings packs, a gas-run drugs refrigerator and autoclaves, an X-ray room with a modern portable machine and adjoining darkroom, an anaesthetic/scrub room, a basic theatre, the dispensary, where patients can also be weighed and their blood pressure checked, a small consulting room and attached pharmacy.

The hospital is connected to the village's diesel-generated power supply which is available from six in the morning to midnight. There is an emergency generator for hospital demands outside these hours.

The Job

I was assisted in the hospital by three part-time nurses. While having no formal training, these three wise nurses have accumulated a great deal of experience and individual skills: for instance, one is an excellent theatre nurse; another is capable of producing good quality X-rays; the third perform-

ing temporary dental work. Like most islanders, they are practical rather than intellectual people and learn quickly when shown a task.

Open surgery was from nine to eleven o'clock each weekday and the rest of the morning was spent teaching the nurses or on hospital chores. My typical day included five to fifteen patients at morning surgery, usually no home visits, up to three visits or attendances at hospital (usually the latter) later in the day and an unbroken night's sleep. This seems to be a high consultation rate but many would not have been seen by a GP in the UK, for instance, for repeat prescriptions, casualty attendances, cases for the practice nurse, etc.

The islanders' natural reticence and sometimes limited expressive skills could make professional communication quite a challenge and they often assumed cure or improvement lay only in medication. I was very aware that they had to put up with a new doctor each year and that this might discourage the shy, or those with sensitive physical or psychosocial problems, from seeking help. I tried not to change the prescribing regime of my predecessor too suddenly or drastically.

Medical supplies are ordered from the UK and South Africa. A second opinion and medical back-up are in Cape Town where a general surgeon is the first point of contact over the radio. Patients sent for elective investigations or operations in Cape Town are scheduled for as short a stay as possible between boats, as medical, accomodation and subsistence costs in South Africa are the major drain on the medical department budget.

During my stay there were two births (both uncomplicated in first-time mothers), one death (gastro-intestinal bleed in an elderly hypertensive woman with a peptic-ulcer), admissions for viral pneumonia, terminal lung cancer and three operations: two appendicectomies and the repair of a crushed/degloved seaman's hand which involved digital amputations.

Both the optician and the dentist visited during my stay - a happy coincidence - so that I had little optometry to perform and only about a dozen dental extractions. Fluoride supplementation and intensive education campaigns have begun to reverse the long process of decay since the pre-war years when Tristan teeth were famous for their freedom from dental caries.

The hospital contained some ageing pathology equipment such as a haemoglobinometer, Westergren's ESR ware, centrifuge and microscropes, but these last were the only instruments I felt the need to use. Keeping equipment serviceable and reliable is difficult in such an isolated situation.

The standard of general practice on Tristan is similar to that in the UK. I did my fashionable bit by marking notes for smoking status, baseline weight and blood pressure readings and caught up on outstanding child and adult immunisations. Obese adults, including all those on thiazides for hypertension, were screened for diabetes and I also sent blood to Cape Town on those youngsters not yet blood-grouped for our emergency register. I continued school medicals and instituted early developmental surveillance.

I felt it was extremely important to take full notes, even within the limitations of the Lloyd George system, as the MO's transient stay is often shorter than the illness and a successor is always grateful for any clues.

Medical Conditions

Tristan pathology is predominantly that to which we are accustomed in the UK. *Asthma* is the most common condition though better controlled and affecting fewer than in years past. Few use their inhalers perfectly but they seem to be an important psychological treatment for a disease which has some recognised psychological triggers. A quarter of the islanders suffer to a variable degree though none require maintenance on systemic steroids any longer.

Obesity is common in the more sedentary older women and is often associated with *hypertension* which is resistant to various treatments in several patients. *Dyspeptic symptoms* are common even in younger adults, mostly due to reflux oesophagitis but with a number of peptic ulcers clinically. *Minor trauma* and *musculoskeletal* and *joint problems* abound and have traditionally been ascribed to the active lifestyle.

Headaches are still a frequent complaint but less so than in the past, possibly due to less psychosomatisation. However, there does seem to be a tendency to common migraine. Tuberculosis is fast becoming of historical (if recent) interest and past worries of helminthiasis and amoebiasis are not currently borne out.

Indulgence in *smoking* seems to be less than in the UK and is mainly confined to older men, and recently young men and women. Cigarettes are one third of the UK price but twice as expensive relative to income.

Alcohol is a topic which features in most medical department reports. Pathology directly attributable to the long-term effects of alcohol are rarely seen. However, minor motorcycle accidents, the occasional battered wife or girlfriend, outbursts of public violence and many stress-related symptoms illustrate the amount of psychosocial trauma that repeated abuse is inflicting.

Most men stay fit into late life while the women become obese relatively early. The *diet* is high in energy, through complex carbohydrates and fat, and fairly low in fibre, due to the overcooking of the fair intake of fresh vegetables..

In this tightly knit community, suppressed emotions and psychosomatic symptomatology have been traditional safety valves for *stress*. While perhaps slightly less frequent than in the past, this is still evident in tension headaches and stress-triggered attacks of migraine and asthma. However, islanders rarely complain of the despair or insomnia that evoke sinking feelings in British GPs.

Obstetrics, gynaecology and family planning are areas requiring more education to overcome attitudes. Tristan society is chauvinistic; women are reluctant to present gynaecological worries and family planning is another of their responsibilities. The pill is the most popular contraceptive. One woman had a coil which I replaced. Condoms are used by a few of the younger men. Coitus interruptus is widely practised otherwise. Recently, there has been a high incidence of conception out of wedlock although island social structure prevents this being an antenatal risk factor.

Uniquely Tristan

Access to anything new on Tristan is keenly exploited and the local radio service were anxious to lay hands on the mixed collection of music tapes I had brought. Sensing an opportunity, I suggested I might be allowed to host a weekly programme of my music

interspersed with medical homilies and advice. With some trepidation, they agreed.

An early success was to hear that the island store had sold out of whole meal flour two days after a programme discussing the topic of a healthier diet ("...turn your 'sinkers' into 'floaters'...").

At my request, I was appointed in an advisory role to the Island Store Committee as I believe the attitudes and behaviour of Tristan islanders regarding their own health can be altered by means other than education alone, and I wished to lobby that group of islanders responsible for ordering imported goods. The government is the only public supplier on the island, what food is imported to eat, alcohol to drink and tobacco to smoke is almost entirely within their control, as are their retail prices.

As a result, the boat on which I departed brought low-alcohol beer to the island which was to be introduced at a price no greater than that of the usual beer. The Treasurer seemed amenable to the principle that 'healthier' goods might be subsidised by those less healthy items.

Some of my other official duties included chairing the Public Health and Works Committee, inspecting the fresh water supply, the disposal of sewage and refuse, conditions in the slaughterhouses, and the cleanliness of public toilets. Also, as Port MO I had to scramble over the side of ships on ropeladders before giving them health clearance. I knew how Canute felt as I tried vainly to keep viral illnesses off the island - a case of open tuberculosis would have been much less harmful in comparison.

On occasions I was asked to assist the Agricultural Officer with various veterinary problems. I was usually out of my depth and could offer little advice or worthwhile operative skills.

One of the highlights of the year was Ratting Day, the traditional paid public holiday when a concerted and competitive attempt is made to exterminate as many rodents as possible from around the settlement and potato patches. The honour of helping to count the tail of those mice and rats taken (1200 in all) fell to the MO.

Conclusion

My time with the generous, unpretentious people of Tristan da Cunha was uniquely enjoyable. Professionally, it was a delight to be able to expand one's areas of unusual work to fill the available time, rather than trying to cram 30 hours work into a 24 hour day, to which we are all too accustomed. Socially, there was time to read, write, run, listen to the World Service, play badminton or my violin, climb the mountain, swim and attend lots of birthday parties - major events on Tristan; and with 300 people and only 365 days...

However, I found myself more comfortable maintaining a professional neutrality and avoiding close friendships or alliances as these might automatically alienate others. One's conduct has to be exemplary in a community such as Tristan, although some would gossip even about a saint.

I missed not being able to have a good old professional moan about day-to-day problems and was frustated by the infrequency and delays of communication with the outside world. I learned to adjust to the subtleties of the same language, the same flag but a different culture.

And I *would* return to this modern-day St Kilda - but I wouldn't let my defence organisation know what I'm getting up to!

Psychiatry in Zambia

A holiday in Zambia provided a fresh and gripping look at life, medicine and psychiatry. I was made most welcome by Professor Alan Haworth, head of the Department of Psychiatry in the local university, and spent an engrossing few days with him and his colleagues.

Zambia is a country large in area the size of France, Netherlands, Germany and Switzerland combined with a population of 7,000,000. Forty five per cent live in towns of 20,000 or more which means that there is a very low density of population in the rest of the country. I was based in the capital, Lusaka, which itself has a population of about 750,000.

My first 24 hours were spent soaking up the tropical light and colourful atmosphere of that busy city. There are great contrasts with obvious poverty and deprivation on the one hand, and Mercedes and expensive western clothes on the other.

On the streets one can see the occasional child on all fours and the occasional adult hirpling along fixing his knee joint, both ravaged by past polio. In the teeming streets only two 'madmen' were pointed out to me. One harmless and the other addressing a large crowd like a one-man Hyde Park Corner.

The World Health Organisation's definition of health is "a state of complete physical, mental and social well-being". However competing demands for limited resources have marginalised provisions for mental health in many Third World countries. ***Dr R.J. Craig*** *recently visited Zambia and examines the extent of the country's psychiatric services.*

Within a short time I was shown round the large modern University Teaching Hospital in Lusaka and was made aware of the great public health problem that AIDS is presenting that country. The issue is still very sensitive and on everybody's lips. It is being dealt with constructively with a well-thought out School's Health Education Campaign and high level workshops, such as one on Policy on Counselling.

The University Teaching Hospital, of course, is only part of the impressive Uni-

Dr RJ Craig, Olim Praeses, is a consultant psychiatrist at Rosslynee Hospital, Roslin, Midlothian.

The mental handicap ward with patients and staff. These are all the patients and staff in this field for the whole of Zambia.

versity of Zambia whose main campus was some distance up the road. There are 3,000 students in the University of Zambia. The Medical School is very active, but sadly the poor salaries and relative difficulties in practising modern medicine has resulted in a net emigration of newly qualified doctors. The number of psychiatrists in the country for example, has fallen from 13 to 5.

Another problem which emerged was that of the scarcity of up-to-date text books and journals for all departments, this being a problem for the individual student whose allowance of 700 kwacha (1 kwacha equals roughly 7.5 pence) allows him or her to buy about two text books per year. Nevertheless the buildings are modern, the campus is bright and much good teaching goes on.

The Mental Health Services are centred at the Chainama Hospital complex and its 480-bedded mental hospital. There are also outpatient clinics of other specialities, a training centre for clinical officers (who are trained almost to medical standards and are now very much the back bone of provision of medical care throughout the country), Mental Health Resource Centre (with good audio-visual facilities but again a scarcity of text books) and a Malaria Research Laboratory.

Although the Chainama Hospital with its 360 general beds and 120 male forensic beds are important, especially as a reference hospital, Professor Haworth has developed a sophisticated Community Mental Health Programme with mental health staff, mainly psychiatric clinic officers and enrolled nurses, operating from about 250 centres

Summary of Pyschiatric Case Histories

-one youngish lady with severe depressive illness commencing at the time of her non-appearance at the funeral of her husband's sister's husband twelve months previously, the underlying fear being that she would be accused of having wished death or even having *caused* it, perhaps by witchcraft.

- *petit mal* and non-compliance with treatment in a 6 year old Tongan associated with great family tension, both parents dying almost certainly HIV positive.

- an 18 year old with manic depressive illness on Lithium therapy, which was only available in Lusaka and for which no laboratory monitoring was available. In addition she suffered a serious adolescent identity crisis with her rather intense, professional unmarried mother separated from a wealthy, but rather emotionally distant father living 200 miles away in the copperbelt.

- depressed lady on Amitriptyline who had travelled several hundred miles from the Northern Province with her young daughter, her medication only being available in Lusaka.

- a 32 year old man brought in by his older brother with a three week history of anaemia, abdominal and chest pains, disorientation, restlessness, talking to himself, weight loss and patchy hair loss. Being in addition sexually promiscuous he was almost certain to be HIV positive and was admitted to the sick bay at Chainama Hospital.

- a former school teacher who, completely out of character, had committed a bizarre homicide some months ago and who accordingly was thought to be HIV positive as the most likely reason for his personality change.

- a mentally handicapped man, obviously very much the hospital character, was *au fait* with confidential hospital and political matters. He was asked, "Who's going on strike next?" His reply, "The nurses", was thought to be very likely with salaries then equivalent to £30 per month.

throughout the country. The Mental Hospital beds are therefore not by any means filled. This has been a natural development and not due, as in westernised countries, to an aggressive discharge policy.

Going round the hospital, bareness and deprivation is apparent to the westernised eye with hardly any mattresses on the beds, concrete floors and most window panes broken except for the female rehabilitation ward. Each ward has 40 to 60 patients. The male and female admission wards have 20 and 10 admissions weekly respectively. Informal admission is becoming commoner through Clinic 6 at the University Teaching Hospital and urban clinics, but most patients are still admitted on detention orders and come, not via G.P.'s, who don't exist, but the police. The forensic section is, of course, used for the more dangerous patients and here there is another striking contrast to the UK. with the very much higher proportion of male to female patients, i.e. 120 males to 6 female patients.

There is a very active teaching programme contributing to the training of medical students, clinic officers, nurses and other disciplines (although few of the latter

exist!). Besides formal lectures there is a weekly 3-hour teaching case conference and a Saturday morning Journal Club. The teaching case conference I was lucky enough to be at was visited by Elizabeth Colson, the distinguished Emeritus Professor of Anthropology from the University of Berkeley, California. After her many years of contact with the Tongans, a tribe in the Gwembe Valley in the South of Zambia, she is also very much considered an Honorary Tongan. Her contribution to the case conference therefore reflected her deep knowledge of the Zambian culture which her recommendation to the case conference reflected, i.e. that the divination of the spirits of the patient's two deceased brothers should be sought to elucidate his symptoms. Spirit possession is seen to be very important as a cause of many troubles, not necessarily medical. Traditional healers therefore are still very much part of the culture and are used by Zambians in all walks of life, along with westernised allopathic healers.

It was perhaps the out patient clinic that left me with the biggest impression of my trip, however. The one I attended was run by a lady consultant. Her enthusiasm and freshness throughout the five hour clinic was quite amazing and only surpassed by the kaleidoscope of patients, some of whom I well recall and are shown in the box on the previous page.

How can I conclude? The country has great problems, both medical and other. Despite the deprivation, the country, however, is rich in the culture and warmth of its people, both native and expatriate. Besides the obvious material needs for up-to-date text books, journals and equipment, therefore, for the medical person prepared to devote himself to a 3-year contract on OSAS terms there would be many long lasting rewards, both professional and personal.

a short history of Obstetric Anaesthesia

The pain of childbirth has afflicted women for generations and the quest to relieve such pain has been pursued throughout history. **Dr Ann Whitfield** relates the story of obstetric anaesthesia from its early beginnings in ancient times, the introduction of chloroform by Sir James Young Simpson in the 1800s, through to the present day and the controversy over natural childbirth.

The unique pain of childbirth has been recognised since time immemorial. There are numerous references in the Bible such as Genesis Chapter 3 and there are many other descriptions of attempts by previous civilisations to alleviate this torment. The Chinese gave their parturients opium and alcohol, while the Egyptians in Pharaonic times burnt turpentine near the labouring woman or concocted a vinegar and marble dust mixture to rub on her abdomen. Acknowledging childbirth to be painful and often dangerous, the Babylonians and Greeks before Christ practised goddess-worship and placation with sacrifices. Hippocrates noted that primipara suffer the most pain in childbirth. Many ancient methods were non-pharmacological and seem to us barbaric.

Witchcraft was practised in mediaeval times and in 1591 Eufame McCulzean was burnt to death as a witch in Edinburgh for attempting to cast her labour pains onto a dog. In the 18th century Mesmer induced a trance-like state in his patients, the forerunner of present-day hypnotism which is occasionally used in childbirth. The introduction of general anaesthesia in 1846 was immediately recognised by James Young Simpson as applicable to childbirth. Simpson was professor of obstetrics in Edinburgh (and senior president of the R.M.S. in 1835), a man of wide interests and with a great humanitarian desire to introduce some form of pain relief for his patients in labour (Figure 1). Hearing of Liston's success in London, using ether for an amputation, he at once obtained a small quantity and used it on January 1st 1847. On January 19th he gave the first obstetric anaesthetic. He continued to use ether during 1847 but was not satisfied with it and began searching for an alternative.

The anaesthetic properties of chloroform were possibly discovered by David Waldie of Linlithgow. He made a pure preparation and promised Simpson a sample. However, a fire destroyed his factory and Simpson ob-

Dr Ann Whitfield is a consultant anaesthetist at the Simpson Memorial Maternity Pavilion, Royal Infirmiry, University of Edinburgh.

tained the chloroform from Duncan Flockhart of Edinburgh. At a party in his house in Queen Street the guests inhaled the agent and "were all under the mahogany in a trice", alarming Lady Simpson when she entered the room. Simpson then used chloroform on November 4th, presenting his findings to the Medico-Chirurgical Society on November 10th. However he was subsequently much reviled by members of the medical profession and ministers of religion; Genesis chapter 3 was quoted against him: "In sorrow thou shalt bring forth children". Others accused him of turning the lying-in chamber into a scene of drunken debauchery.

Figure 1. Sir James Young Simpson, the father of obstetric anaesthesia.

Simpson refuted his critics, interpreting sorrow as toil rather than pain. However, not until 1853, when Queen Victoria requested chloroform for the birth of her ninth child, did its use finally become respectable. The technique became known as *Chloroform a la Reine* and this agent was used in obstetrics until after the second world war.

In 1880, a Russian, Klikowich, described the use of nitrous oxide in labour. In 1933 Minnitt developed a self-administering nitrous oxide and air apparatus which was widely used until 1970. Its successor, Entonox (50% nitrous oxide in 50% oxygen premixed in one cylinder), was introduced in 1961. Another inhalation agent, Trichlorethylene, was also used for about forty years until its withdrawal in 1984.

Bier performed the first spinal anaesthetic in 1898 and the first epidural, described by Sicard and Cathelin, followed in 1901. Surgeons carried out the early work on regional blocks; indeed Barker wrote "I am doubtful ...of spinals falling into the hands of anaesthetists". Jonnesco, a Hungarian, agreed saying "Anaesthetists are often inexperienced and never responsible".

Nowadays, both techniques are widely used in obstetrics in developed countries and are the responsibility of anaesthetists.

In 1906 'Dammerschlaf' or Twilight Sleep, was introduced; this was achieved by administering morphine with hyoscine. In a long labour the hyoscine was repeated but not the morphine. Thus the pain returned, but the hyoscine, providing amnesia, clouded the unpleasant memory. In 1913 Gwathmey described the use of colonic ether in oil, which was used until the 1950s.

What of present day methods of obstetric analgesia? Opiates are widely used in generous quantities, most commonly diamorphine, morphine and pethidine. Patient controlled analgesia (PCA) methods are now available. The continuous epidural technique was introduced in 1948 by Flowers. Until recently spinals have been bedevilled by an unacceptably high headache rate after delivery; we now have fine 'pencil-point' needles and the problem has virtually been eliminated. Carrie has introduced a combined spinal/epidural technique which allows a rapid onset block with the ability to top up thereafter. Continuous spinal equipment has recently been introduced, with which a fine catheter can be placed in the subarachnoid space. A comprehensive epidural service is now considered mandatory in large obstetric units in Britain. Opiates are used in combination with local anaesthetics in epidural and spinal techniques to enhance analgesia. PCA can also be used epidurally.

A drawing of an early inhalational general anaesthetic apparatus.

In recent years there has been increasing interest in natural childbirth. Evangelists such as Sheila Kitzinger preach against institutionalised, high technology obstetric care and there have been others including Grantly Dick Read, Lamaze, Leboyer and Odent, who promoted relaxation, psychoprophylaxis and underwater delivery. Klaus, Kinnell *et al* in 1986 described the recruitment of a *doula* (woman's servant) to sit with a patient throughout labour in order to give support and encouragement. They found that patients attended by a *doula* had shorter labours, a lower Caesarean section rate and a lower oxytocin augmentation rate. Further more, their babies required intensive care less often. Transcutaneous Electrical Nerve Stimulation (TENS) is now another popular analgesic method, particularly in the early part of labour. This is achieved with simple equipment operated by the mother to stimulate endorphin release and to block the transmission of painful stimuli.

In this fascinating story, stretching back over 140 years, we have come a long way, although many women still approach labour with great trepidation. Of all the people mentioned in this review, the greatest surely is James Young Simpson, who had a vision and pursued it, making the relief of pain in childbirth an attainable goal.

Journalscan

This is a short collection of interesting items pertinent to medicine and science in general. It gives a taste of some of the current work in hand around the world. We would welcome any contributions of this nature, just a short chatty narrative of an interesting or amusing article that you have seen or read.

The Lost Ballpoint Pen

The case reports in the journal *Injury* continue to be a source of amazement and fascination. A recent issue (Injury 1991; 22(2): 148.) reports a lady presenting to casualty. Her history was the loss of a pen whilst 'playing' with her husband. Rectal and vaginal examination failed to locate the whereabouts of this pen; the patient agreed that she may have been mistaken and was discharged.

Two days later, following symptoms of dysuria, frequency and pain, the pen was located by X-ray in the bladder. It was removed successfully and the patient recovered. Physicians are asked to consider the urethra and bladder when other examinations fail to find a 'lost' foreign body, and are reminded that they will be amazed at the capacity of the bladder to hold surprises.

Reach for a Leech

Two articles from the same issue of *Injury* (1991; 22(2): 159-63). sing praises of the medicinal leech (*Hirdo medicinalis*). Popular in the nineteenth century, these blood-sucking creatures not surprisingly went out of favour.

However their ability to release local anaesthetic, a vasodilator and an anticoagulant has attracted the interest of microsurgeons.

Replantation or transfer of tissue following injury can only be successful if an adequate blood flow is maintained. The hero leeches are used to decongest venous compromised tissue and prevent tissue necrosis.

Dissecting Vertebral Arteries

An important cause of stroke in young people is an extracranial dissection of carotid or vertebral arteries (J. of Neurology, Neurosurgery and Psychiatry 1991; 54: 365-6). Dissection is most commonly associated with violent abnormal neck movements that occur in gymnastics, road traffic accidents or chiropractic manipulations. It is postulated that rotation and/or extension of the head compresses and stretches the vertebral arteries which are especially vulnerable because of their relatively fixed close relationship to the first cervical vertebra. This short report presents the first documented case of vertebral artery dissection in association with a tonic-clonic seizure.

A 34 year old woman with a history of well controlled epilepsy had a nocturnal tonic-clonic fit, and the following morning complained of unilateral occipital headache and paraesthesia of the left hand side of the face and left hand. The following day, mild left pyramidal signs, left somatosensory inattention and other left sided signs developed. On CT scan a small area of infarction in the right temporoparietal region could be seen. Angiography demonstrated a left vertebral artery dissection.

It is important to recognise dissection as a possible cause of stroke as treatment can then be aimed at preventing secondary thromboembolic complications by anticoagulant therapy.

Glaucoma Genes

Two French anthropologists recently observed a strong association between manic depressive psychosis and congenital juvenile glaucoma (News and Political Review, BMJ, 302: 868).

They constructed a genealogical pattern of sufferers of manic depressive psychosis, glaucoma and diabetes (often associated with glaucoma). The genealogical tree they produced led to the conclusion that the sufferers of congenital juvenile glaucoma descended from a single couple from a hamlet near Wierre-Effroy, Pas-de-Calais, who died in 1495.

This amazing discovery would suggest tracing all possible carriers of the autosomal dominant gene and offering early preventative treatment.

However under French law, the names of the 30 000 potential carriers of the gene cannot be identified and they cannot be told of their risk.

But all is not lost - the blood samples collected are being used to trace the genes involved in glaucoma.

Small babies, Big problems?

A study in Hertfordshire of 468 men suggests that reduced foetal and infant growth is associated with non-insulin diabetes mellitus (NIDDM) and impaired glucose tolerance in adult life (BMJ 1991; 303:1019-22). One hypothesis is that poor nutrition during critical periods of foetal growth results in impaired development of pancreatic beta-cell function. When nutrition becomes abundant there will be insufficient capacity for insulin production. Whether and when NIDDM occurs is dependent on the attrition rate of the beta-cells with age.

These findings suggest that the environmental influence of maternal nutrition as opposed to genetic factors can be an alternate explanation for the strong concordance of NIDDM in monozygotic twins.

White Wash

How often do you wash your white coat? Once a week? Once a fortnight? Once a month? Or even less often?

Out of 100 doctors studied in a Birmingham hospital, 29 changed their white coats less than once a fortnight. A further 5 wore their white coats for periods exceeding 8 weeks!

The purpose of the study was to determine the level and type of microbial contamination present on doctors' white coats in order to assess the risk of transmission of pathogenic micro-organisms by this route in a hospital setting (BMJ 1991; 303:1602-4).

The results showed that the cuffs and

pockets were the most highly contaminated areas, especially with *Staphlococcus aureus*. This organism was particularly common in white coats belonging to doctors' in surgical specialities. Other pathogenic bacteria were not isolated.

The level of bacterial contamination did not vary with the length of time the coat had been in use, but it did increase with the level of use by the individual doctor. This is because a maximum steady-state contamination of white coats occurs after one week of use; however the frequency of use determines how rapidly this level is achieved.

White coats are therefore a potential source of *Staphlococcus aureus* cross-infection in surgical wards, and it may be advisable to replace the white coat with a plastic apron before attending patients. Outside surgical areas there is little reason to recommend the changing of the white coat more than once a week, or for excluding the wearing of white coat in libraries and dining areas.

Football Fever

Is Scottish football exciting? Apparently not, claim some sections of English media such as London Weekend Television's *Saint and Greavsie*. This stimulated a group of physicians in the Western General Hospital, Edinburgh, to carry out a study to determine the haemodynamic response in football fans as they watched a football match (BMJ 1991; **303**: 1609-10).

They monitored the blood pressure and heart rate of ten healthy male supporters from each of the Premier League teams Hearts and Hibernian over two home matches. They showed that systolic blood pressure and heart rate were significantly higher when the men were watching the match than when they were at home. Heart rate was maximal just after the supported team had scored a goal (surprise, surprise).

The conclusion? Scottish football is indeed exciting, but is it as exciting as that south of the border?

Dangerous Dogs

Dogs that bite have recently come into prominence because of the large number of incidents highlighted in the media. A study of 107 dog bite victims was carried out in a plastic surgery unit in the West Midlands to determine the circumstances of dog bites and to identify risk factors (BMJ 1991; **303**: 1512-13).

Males and females were equally bitten by dogs. However the majority of the patients (54%) were children under the age of 15 years. The dogs which bite most often are the Staffordshire bull terriers (15 cases), Jack Russell terriers (13), medium-sized mongrels (10) and Alsatians (9). They tended to be male dogs (85%).

Adults are usually bitten at home by their pet dog, while children were commonly bitten at a friend's, neighbour's or relative's. 60% of bites occurred when the victims were playing, petting or walking their dog. The remainder were judged to be unprovoked attacks.

Surprisingly Rottweilers and Dobermans did not feature significantly (7% of bites). However the study suggests that attacks by large dogs were usually sustained and produced more severe injury.

Cat out of the Bag

Continuous Ambulatory Peritoneal Dialysis (CAPD) is commonly used as a renal re-

placement therapy. It involves using the patient's peritoneum as a dialysis membrane by infusing fluid into the abdomen via a catheter and plastic tube. The fluid is removed several hours later and the process repeated throughout the day.

Peritonitis is a common complication, usually caused by the patient's own *Staphlococcus epidermis*. In an unusual case, a man undergoing CAPD presented after his kitten had bitten through his dialysis line (BMJ 1991; **303**: 1610-11). Despite intravenous vancomycin the patient developed severe peritonitis and intravenous fluids were necessary until bowel activity returned. Culture revealed infection by vancomycin-resistant *Neisseria pharyngis*. The patient made a full recovery after gentamycin treatment.

Cats are therefore a significant hazard in patients receiving CAPD and should not be allowed near the patient when fluid exchange is being performed.

Disappearing Epilepsy

Kennedy and Schon have reported four cases of spontaneously resolving cerebral mass lesions associated with epilepsy in residents of the United Kingdom presenting to a London hospital (BMJ 1991; **302**: 933-5). Such lesions may account for almost half of cases of adult onset epilepsy in India, but were previously considered rare in this country. The aetiology is unclear, but may be due to *cysticercosis* or another infectious agent.

Awareness of such cases is important because neurosurgical intervention is not indicated, and resolution may occur with anticonvulsant drugs with appropriate chemotherapy.

Kaposi's Sarcoma in AIDS

Beral *et al* have demonstrated that in over 2000 men with homosexually acquired AIDS in the UK, 23% had Kaposi's sarcoma (BMJ 1991; **302**: 624-5). No men who had contracted AIDS by other means had the tumour.

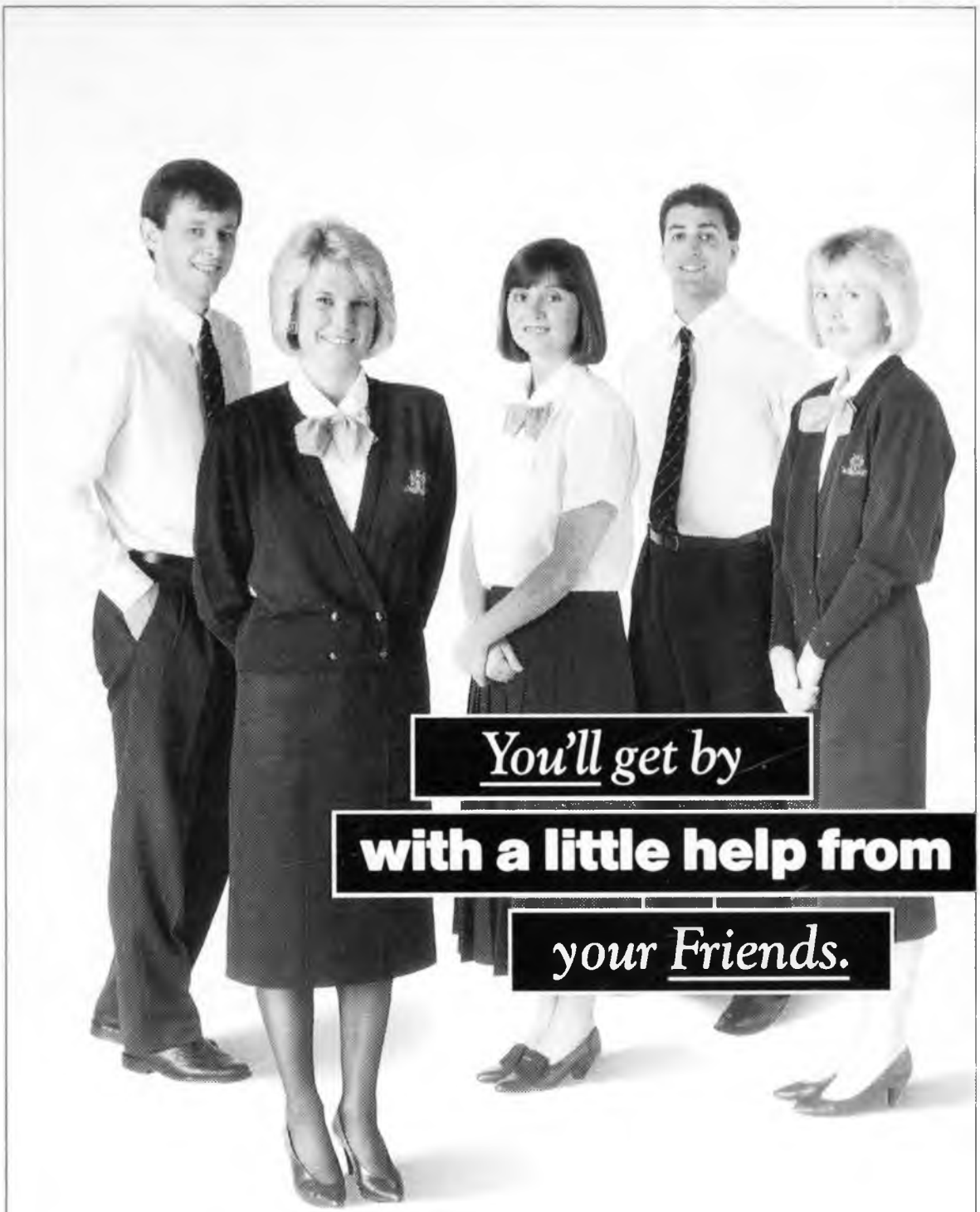
The risk of developing Kaposi's sarcoma was significantly higher if the source of HIV infection was homosexual contact in Africa or the USA compared to one in the UK. These results lend weight to the idea that Kaposi's sarcoma is caused by a sexually transmissible agent in addition to HIV.

Dietary Salt and Blood Pressure

In three meta-analyses, a London group have looked at the relationship between dietary salt intake and blood pressure (BMJ 1991; **302**: 811-24).

Comparing populations, a difference in salt intake of 100 mmol/day was associated with average difference in systolic blood pressure (SBP) of 5-10 mmHg, varying with age and initial blood pressure. The differences in diastolic blood pressure were about half as great.

These results were confirmed for within-population variation of SBP with salt intake. Analysis of trials lasting longer than 5 weeks showed that reduction of blood pressure on an individual basis could be achieved by dietary salt reduction with results closely matching those predicted by the population studies. It was estimated that a moderate reduction of daily salt intake of 50 mmol (about 3g) would reduce the incidence of stroke by 22% and of ischaemic heart disease by 16%.



BANK OF SCOTLAND
A FRIEND FOR LIFE