Annals of Clinical and Medical Case Reports

Case Report

ISSN 2639-8109 | Volume 9

A COVID Journey in Diabetes: T1D Diabetes Patient 44 years – Winning in Insulin Chicanes

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Received: 12 Jul 2022
Accepted: 25 Jul 2022
Published: 30 Jul 2022
J Short Name: ACMCR

Keywords:

Blood glucose; Hypoglycaemia; Insulin; Hyperglycaemia; Infection risk Temporary Mental Impairment

Citation:

Beatty D, A COVID Journey in Diabetes: T1D Diabetes Patient 44 years – Winning in Insulin Chicanes . Ann Clin Med Case Rep. 2022; V9(11): 1-9

1. Diabetes Complications of Hypoglycaemia, Hypoglycaemia and Neuroglycopenia are often encountered by patients treated with insulin. It is feared by patients and families often leading to emotional and mental scars and can affect lifestyle and confidence. Hypoglycaemia can occur in premature babies, persons with hypopituitarism and Addison's Disease. Low blood glucose can affect athletes and the elderly leading to falls. Cases are individual and often difficult for families, clinicians, lawyers and courts to understand.

Temporary mental impairment and PTSD injury may occur requiring counselling to overcome hypoglycaemia.

44 years T1D insulin treatment and personal hypoglycaemia experience following wrong insulin care 1987 – 94 led me to research published reports. The first hypoglycaemic event was described by Banting, Best and Macleod at the time of insulin discovery as a treatment for diabetes in 1922 in Toronto. This review includes observations from 'Forensic Aspects of Hypoglycaemia' by Prof Vincent Marks, 629 case references. February 2019.

2. Abstract Keywords

Blood glucose; Hypoglycaemia; Insulin; Temporary Mental Impairment. Complications affecting stable Blood Glucose levels include Otitis Externa, Osteomyelitis, Neuropathy pain, infection treatment by IV antibiotic delivery, periodontal dental link with gum disease, inflammation, chemical change reducing insulin effectiveness, calcium stones in the saliva duct, sodium, calcium, magnesium electrolyte imbalance, Omega 3 deficiency, night saliva duct cortisol secretion, depression, Vitamin deficiency, imbalance.

The use of insulin and C Peptide assay is beneficial in forensic investigations following unexplained death or insulin use as a weapon in alleged criminal matters.

Society can learn from this research to provide improved diabetes care for patients to achieve good health and long life despite the daily burden of managing a condition with no cure now extended to Covid 19 lifestyle.

A Duty of Care exists IN LAW to a person in a state of hypoglycaemia to summons paramedic help when the person is unable to help themselves because of **Temporary Mental Hypoglycaemia, Low BG. ie RED ALERT**

Lockdown occurred in March 2020 after the first wave of Covid-19 infection hit the UK and the World's First Covid-19 Vaccine was produced in Oxford after fast-tracking immunogenic research programme and approval granted very promptly. In February 2021 I faced an Ophthalmic Blood Clot Challenge.

In January 2020 I felt not quite 100% ok when I was supposed to fly to Sydney to present my research. My friend and colleague since 1994 Dr Matt Kiln, GP, who lives in Sydney kindly stepped in to help, as he had done in 1994 when I was seriously ill from incorrect insulin prescription discovered in May 1994. This led to my interest on Hypoglycaemia and Neuroglycopenia.

It may have been that I had experienced a very mild form of Covid 19 Infection. I will never know.

I had 1st AZ Covid jab February 2021. This appears to have caused raised BG putting stress on Rods & Cones in the Eye with Retinal Haemorrhage Blood Clot which burst.

From February 2021 – May 2022 I have self-treated the Ophthalmology problem with OLED Light Mask worn every night 12.00pm to 7.00 am. Ref G Arden, Noctura 400 Polyphotonix.

3. The Covid Journey

Throughout 2020 I continued with my research and ensured sensible diet, exercise, social distancing. I was running ACS Ltd supplying nebulisers to Care Homes in the UK from Germany. Lockdown caused problems. In March 2020 was First Lockdown was announced in the UK.

As **Elected Chair of Diabetes UK St Albans Voluntary Group** a bizarre disclosure was identified by Diabetes UK causing a Chicane to my elected position and to the running of the Charity Voluntary Group. I was a democratically elected Chairman of the leading UK Diabetes Charity originally founded in 1930 and named as The British Diabetic Association. 1967. The Charity is registered with the Charities Commission with obligations and legal duty of care and safe being and wellbeing of members. A misguided event occurred leading to a Complaint Investigation which Diabetes UK were obliged to undertake at inconvenience to the Charity Diabetes UK by complaint investigation.

Investigation by ICO, Information Commissioner's Office and Police Scotland identified no wrongdoing. The chicane caused inconvenience and disruption to research into Diabetes and Covid.

3.1. Immunogenic Research, Diabetes, Covid -19

All patients with Diabetes caused by pancreatic failure or partial failure in T2D (for simplicity) leaves patients more at risk of infection from colds, flu, upset Endocrine Clinical and Hormone imbalance which can lead to Diabetes Complications, including respiratory issues requiring prompt treatment and patient care.

We were presented Globally with a sneaky Covid Virus, previously unidentified. The race was on to find a Vaccine. An amazing emergency vaccine programme started.

In **Costa Rica** a degree of Respiratory Care success was achieved, and we worked on this and disclosed Inhaled Therapy proposals using CE Approved InfraControl Nebuliser to deliver possibly Prostacyclin type therapy similar to successfully treat Pulmonary Hypertension patients introduced in 2000 in the UK, Germany, USA, and other countries.

These observations were presented to the Scottish Parliament and Government with interest and recognition more research was needed and to assist in Diabetes Treatments and Care.

Is Human Insulin Better than Animal Insulin in the Treatment of Insulin-Dependent Diabetes Mellitus? Guntram Schernthaner, Vienna, Presented Edinburgh, Published ADA December 1993.

The paper concluded from research conducted in 1981 and presented at the scientific symposia that 'human insulin was immunogenic in approximately one-third of diabetic patients'. A study published in 1984 concluded: 'the prevalence of HLA-DR3 was higher in the diabetic children on porcine insulin than in the group treated with human insulin. The authors themselves wondered whether this difference may have some influence on insulin antibody formation. Moreover only 52 diabetic children were studied, in comparison with 153 patients in the Scandinavian multicentre trial.' Questions asked were: 'Why is human insulin immunogenic in man?' Does human insulin have any advantage in the treatment of insulin-allergic patients?'

3.2. And Concludes: 'The indications for use of human insulin in the treatment of type 1 diabetic patients are as follows: Human insulin should be used in patients with insulin allergy, immunogenic insulin resistance, or lipoatrophy. 'there are no clear indications for switching longstanding diabetic patients to human insulin, except in the presence of immunogenic complications of insulin therapy as noted before.'

The study 'Efficacy of Xolair in reducing the risk of peanut – induced allergic reactions in subjects with chronic peanut allergy' could be of significant interest in diabetes and the question which requires to be addressed is: Is Xolair suitable to suppress the immunogenicity of human insulin in man and revert the loss of warnings of hypoglycaemia (hypoglycaemia unawareness) in patients treated for diabetes with human insulin therapy thus improving the quality of life in these patients? I do not know. Do research Scientists Know?

3.3. Fatal Incidents: Another unexplained death as a result of a hypo of a 33-year-old lady patient with diabetes treated with insulin for 16 years was reported in Diabetes UK Balance publication, and a coroner's office currently investigated unexplained deaths of 4 insulin dependent diabetic patients in their 20's / early 30's in the previous 6 months. This alarming situation continued to cause concern for many patients with diabetes and their carers and was reported to the Home Office at the time.

I contacted Novartis in the UK and suggested a clinical trial, but this would be off licence and a patient need would have to be proposed along with funding, ethical approval, study protocol.

I became aware friend's daughter had died a few years before for a peanut allergic reaction.

Research may produce a means of reducing the risks of this type of allergic reaction this must be good news.

At the time I had been an insulin dependent diabetic patient for 26 years and this led to a web site for diabetes at www.dri -ft.co.uk to improve understanding about the condition. We were given permission to publish on this web site information from patients who encountered problems with treatment using human insulin.

Hypoglycaemia in Scotland Impaired Hypo Awareness, Duncan et al 2018 is A Published Research Foundation paper.

The paper describes UK Ambulance Calls incidence. Diabetes Severe Hypo Events account for 48,000 – 98,376 Emergency Ambulance Calls Per Annum in the UK. 63-73% are treated at the scene. 2-7% require repeat ambulance attendance within 2 days for Severe Hypo Event Opportunity. 'Prevalence of impaired hypoglycaemia among those who require an ambulance following a hypoglycaemic event is more than twice that found in the general population of people with diabetes'.

Improvements in Pre-Hospital Care for this population could lead to global improvements in health outcomes and decreased service costs. Derek C Beatty© Aston Clinton Scientific Ltd 2020

A Mysterious Something

JB Collop, 1921-1922 - An injection of insulin sourced from pancreas of dogs injected into diabetic dog removes cardinal symptoms of diabetes - Later in December 1921 something went wrong.

4 hours after insulin injection dog 27 had convulsive twitching, dog unconscious- dog died recorded as anaphylactic reaction - No autopsy – Banting & Best wrote it off as a failed longevity experiment. The Discovery of Insulin - Michael Bliss 1982 First Human Patients - Toronto Group –

Discovered lethal effects of too much Insulin - Anxiety, sweating, trembling, hunger, convulsions, Dr Joe Gilchrist had hypo attack in Christie Street, Toronto, arrested for drunkenness.

Rochester Group – June 1922 – Lyman Bushman, hypo unconscious - Large doses of Insulin leading to insanity - Mental Health issue in Diabetes – Fluctuating BG levels – Hypo – Hyper.

Dr Gilchrist in Toronto 1922 was World's First Diabetes Hypo Event, Toronto Police called, convulsions and seizure, confirmed as a Medical Event and NOT Drunkenness as is often mistaken.

My case experience 23.2.1994 was this and unbelieved by many for over 28 years since 1994!

Coroner Reports - A diabetic patient on insulin with an unexplained death may be reported as a heart attack or other clinical trauma. Can be Difficult to Diagnose cause of Death as Hypoglycaemia unless autopsy performed within about 6 hours. Insulin assay, C peptide tests on transfer to hospital when still alive if adrenalin does not kick in to keep patient alive. 'Forensic Aspects of Hypoglycaemia' by Vincent Marks Published February 2019. Vincent Marks published a well written and comprehensive book about the diabetes complication of:

1) Hypoglycaemia and hypoglycaemia unawareness

2) Hypoglycaemia in new-born babies

3) Hypoglycaemia in persons with hypopituitarism ie Addison's Disease: 2000 – 600 patients UK - 2021 – 10,000 patients in UK, - 50% undiagnosed

4) Experience low blood glucose occasionally affecting athletes

5) A helpful reference book to understand the technical clinical and biochemistry content of Hypoglycaemia and effect on patients with diabetes and their carers.

6) Forensic Aspects of Hypoglycaemia - Vincent Marks provides a comprehensive and detailed summary account of many specific hypoglycaemia cases written over 15 chapter topics with 629 references. There is a reference to the 'Human Insulin Scandal' in text. References to Hypo incidents going back to around 1940 before Human Insulin was produced and introduced to treat diabetes then late 1980's early 1990's. BHI Human Insulin approval 26 August 1982, UK; 13 October 1982, Germany; 28 October 1982 USA.

7) The use of insulin assay and C Peptide assay appear to be beneficial in forensic investigations following sudden or unexplained death.

8) Use of insulin as a weapon in alleged criminal matters. Insulin Murders – Marks & Richmond 2007 eg B Allitt • Described are observations of spontaneous hypo episodes and neuroglycopenia.

9) Forensic Aspects of Hypoglycaemia - Today a person in a state of hypoglycaemia convulsion and seizure in the UK is classified as a Number 1 Ambulance Emergency. The legal profession and courts depend on expert witness evidence. A few cases are described where expert opinion may vary depending on the knowledge and experience of those giving evidence in court. Described are observations of spontaneous hypo episodes and neuroglycopenia. Investigation has identified - unexplained deaths in bed syndrome; hypoglycaemia unawareness; car accidents ing Lows caused by low BG levels experienced by drivers; patient falls, collapsing when hypoglycaemia not fully understood.

10) DCCT Trial, USA, 1993, intensive insulin therapy reduces complications. Forensic Aspects of Hypoglycaemia - In late 1980's 3,000 letters of complaint from patients and carers about Human Insulin and switch from Animal Insulin were analysed with Global Input to Low Task Force report. 900 plaintiffs were awarded £0.5 million in Legal Aid in the UK for Counsel Opinion with a plan for a Class Action against the pharmaceutical industry. Many believe in the UK this was the wrong approach and in effect claims should have been against some UK prescribing clinicians who failed to heed advice and warnings from the Pharmaceutical Industry and Medicines Control Agency that on switching from Animal Insulin to Human Insulin dose should be reduced by up to 20% and careful patient BG Blood Glucose monitoring be implemented by diabetes specialist nurses, clinicians, and GP's.

11) Forensic Aspects of Hypoglycaemia - Many found the content of the 'Low Task Force Report on Human Insulin' was 'too alarmist' to place in the public domain when precedent case law and observations going back to 1933 Wauchope and 1940 Joseph Wilder as examples could have been investigated from 1989 and the draft report of December 1992 have references added to make the Report more correct and factual based on precedent information and facilitated earlier publication and been less alarmist. Since that time a better understanding of Hypoglycaemia has been re-

searched to help patients and carers but there remains much to do. Controversy still exists about the Forrest and Evans 'Human Insulin' legal counsel opinion findings where there are grey unfocused areas which might have been substantiated sooner. Following the Human Insulin scandal, the introduction of Analogue Insulin has helped in attempts to reduce the fast BG lowering action of Human Insulin by modified molecular structure, but risks may suggest possible carcinogenic risks but mainly overcome.

12) Forensic Aspects of Hypoglycaemia leaves serious question marks about the understanding of treatments using hyperglycaemic lowering agents to achieve optimal BG levels including insulin, metformin, etc. which today are better, but not ideal. Lack of understanding and education of patients, carers and clinicians and nurses is Essential for better health welfare in patients with Diabetes and their families and carers.

13) The introduction of CGM, Continuous Blood Glucose Monitoring, eg Libre, means today's patient can have a better understanding in blood glucose levels throughout the day and night and with careful insulin management, food intake, exercise, should lead to improved BG and less complications.

14) Forensic Aspects of Hypoglycaemia - Addison's Disease Murder - Hypopituitarism, ADDISON'S Disease, is referenced to patients suffering from hypoglycaemia. 2000 - Shalott - Rare disease: 8 – 10 cases per million. Tragic sudden death of infants not diagnosed with diabetes but being hypo in first year of life (Nurse LL). Anorexia cases and Hypo experience of Elderly Patients in nursing homes are mentioned.

15) Could these events be Genetically Inherited? Very likely – The Genome Odyssey, EA Ashley 2021 Stanford. Observations about insulin used as a murder weapon by nurses are described: Insulin Murders – Marks, Richmond 2007 eg Aylett (Nurse CN Appeal Court).

16) Patient Experience - 1978/79 - Patient was treated for Type 1 Diabetes with insulin commencing February 1979, porcine insulin 30/70 mix. Diagnosis was November 1978. Cause, witness fatal car crash, genetic? Nigeria visits, virus? Initial treatment with Metformin. Treatment with insulin was commenced as patient at High Wycombe General Hospital, England. 2. 1985 – Patient switched from porcine insulin Mixtard 30/70 to Human Insulin Mixtard 30/70. Same dose prescribed. No advice given; no prescribed dose reduction implemented. GP claimed Human Insulin was purer and less complications would arise in the future. Consent was never given to effect change. Patient told there was no choice and animal insulin would be withdrawn. August 1987 – Moved to Bricket Wood, St Albans. Patient registered with new GP practice and outpost surgery in Bricket Wood operating from local Church of England, Church Hall. Church was paid rent from the NHS, to operate from the Church Hall. Patient Experience No Blood Glucose finger prick testing led to Hypo Unawareness. Medical device technology and NHS prescribing approval introduced invasive finger prick blood glucose patient monitoring devices to the NHS UK market to be issued by NHS prescription to Type 1 diabetic patients. Patient was never supplied with a blood glucose measuring device nor blood glucose testing strips nor Diabetes Education to enable test blood glucose levels on a daily basis. Patient believes this to be a breach of duty of care to a patient with Type 1 Diabetes. Health & Safety at Work Act 1974, UK. Patient was driving up to 30,000 miles per annum for work. At a GP consultation irritability, behaviour change, mood swings, acute night time perspiration, muscle cramps, severe blood boils were noted and discussed. These symptoms are widely recognised as side effects associated with incorrect prescription and dose of some Insulins to treat diabetes and demonstrate hypoglycaemia unawareness. This knowledge should have been known by a Cambridge University NHS GP in England.

17) Hypopituitarism, Addison's Disease came into the investigation. Hypopituitarism, Addison's Disease, is treated by prescribed steroid treatment to manage Thyroid Disorder taken daily with dose adjustment required at certain times in life and regular and certainly annual referral to a specialist clinical endocrinologist and Specialist referrals may be required to a Clinical Psychologist or Psychiatrist. Vincent Marks book 'The Forensics of Hypoglycaemia' refers in several places to Hypoglycaemia associated with Addison's Disease and Hypoglycaemia in fatal instances as Spontaneous Hypoglycaemia Neuroglycopenia. Spontaneous Hypoglycaemia was unnoticed for some time in clinical areas then was rediscovered in 1991 and disclosed by publication. Neuroglycopenia can cause anger and irritability. This was noted by GP Dr A at consultation in February 1994 and included in her defending evidence to her employers. Neuroglycopenia is a symptom of hypoglycaemia unawareness.

18) At GP consultation February 1994, the GP failed to diagnose neuroglycopenia. In 1994 no medical records were made available of blood glucose levels until patient arranged this to source BG monitoring testing medical devices on advice from a Diabetes Charity and records were commenced C peptide tests were not available nor BG results.

19) Patient suffered an instantaneous neuro hypoglycaemic attack when unaware at 6.30pm on 23 February 2014 requiring immediate paramedic assistance which was denied by ex-wife and two attending PC's who had a public duty of care to summons an ambulance as did the on-call GP who refused to attend a neuroglycopenia event all in breach of Health & safety at Work Act 1974. Spontaneous Hypo. On 23 February 1994 the patient returned home early evening after considerable exercise in central London, taking underground from Baker Street, collecting car and driving back to Bricket Wood. Patient arrived home in a state of hypoglycaemia unawareness and experienced spontaneous hypoglycaemia with convulsions and seizure and in a state nearing neuroglycopenic hypoglycaemia and incapable of forming intent. Patient's

ex-wife negligently failed to summon an ambulance nor paramedic support but called the police. The two attending constables were recollected stating patient should get into the car and go and obtain a Chinese carryout. This, the worst thing patient could do, was gross negligence and misconduct in public office. Patient's ex-wife refused to prepare normal evening meal which had she done so would have led to return to normoglycemia. Spontaneous Hypo - Patient called the GP surgery and spoke with the on -call GP and requested an immediate GP visit. He refused and requested he speak with patient ex-wife who took the phone and entered another room out of earshot. The Patient does not know what was said. The GP's refusal and failure to treat a spontaneous and life -threatening hypoglycaemic event was it is alleged gross medical negligence in Public Office. Later the spontaneous hypoglycaemia returned and worsened with convulsions and seizure leaving the patient incapable of forming intent and self -treating a life -threatening hypoglycaemic attack with convulsions and seizure of which patient later told but has no recollection. Patient recollects waking the next morning and going to work then returning home in the evening to discover ex -wife and daughter had left. Estranged Daughter for 28 Years is tragic. Patients, ex-wife, solicitors, and advisors failed to seek and understand expert medical opinion confirming hypoglycaemia unawareness issues and Human Insulin. Legal applications for contact to see patients daughter were dismissed based on fictitious fantasy and incorrect advice given, leading to alleged miscarriage of justice brought about by an alleged conspiracy to pervert justice to cover up gross medical negligence with abuse of patient a vulnerable adult in Public Office. Social Services & County Council funders of Police Services were deliberately misled by several who refused to listen and understand, (one deceased) and they negligently failed to investigate evidence as advised by Office of Supervision of Solicitors. This failure, on the balance of probability, was gross misconduct in public office and may now justify further investigation and Public Inquiry (Senior Judge Scotland 2019) and Judicial Review at Public Expense.

20) Summary Investigation identified Patient had experienced Spontaneous or non-iatrogenic hypoglycaemia and near death at the same time ex-wife with NHS treated Addison's Disease hydrocortisone experienced Addisonian Crisis and Adrenalin Crisis. 6) 2 x RED ALERT 999 Ambulance Emergency – Unique Global Clinical Event.

21) Witness neglect led to spontaneous neuro hypoglycaemia with seizure. The event required hospitalisation and forensic analysis of C Peptide, glycogen, cortisol, growth hormone, blood glucose and insulin should have been collected on admission to hospital. Ex-wife suffered from hypopituitarism so caused hypoglycaemia Adrenalin Addisonian Crisis with severe paranoia fear and agoraphobia and fictitious and misleading evidence placed before the courts, so a Miscarriage of Justice has occurred. This may on the balance of probability been caused by hypoglycaemia experienced by ex-wife at the time of the event with her refusal to prepare a normal evening meal. Similar cases are referred in Vincent Marks book from Turkey and India.

22) **Unexplained Death in Bed** - In death in bed cases anatomical change can be noted for up to 6 hours but not thereafter and were not conclusive following discovery of increased incidence of death in bed syndrome following patients switch from animal to human insulin treatment in 1980's and early 1990's. Patient Deaths - Case 1 - 26 year old white man, diabetic for 4 years, September 8 1943, found unconscious, perspiring profusely and unresponsive, transferred to hospital. 'The patient became quite unruly and violent, struggling constantly, having to be restrained, and pulled out the intravenous needle after only 300cc of 5% glucose had been administered.'There was no change in the clinical course during the interval except that the patient screamed irrationally at times.' 'Thereafter the Patient improved and apparently had an uneventful course after proper regulation of his diabetes.'Case 2 - 55-year-old white male, diabetic since 1938, was admitted to St Paul's Hospital in diabetic coma on February 13th 1945 at 12 noon having been found unresponsive at 10.00 am, but was alright at 7am. 10% glucose solution was started intravenously immediately upon his arrival and was continued until the patient had received 4000cc by 10.45pm. The Patient remained semi-comatose on March 1st until 9.00pm at which time he appeared very restless, got out of bed, struggled with the nurses, and had alternating intervals of crying out irrationally and of being quiet. The patient remained about the same until the 16th March when he became weaker, his temperature began rising, and signs of pneumonia appeared in the lungs. He died on March 18th at 8.20pm. Patient Deaths Case 3 - 7-year-old white male, diabetic since January 1943, admitted to Baylor University hospital at 4.30pm on September 27 1945 following convulsions. As the patient continued to have convulsions and was comatose it was decided to bring the child to Dallas. The patient was admitted to hospital upon arrival.' The patient was given 70cc of 50% glucose and 1000cc of 10% glucose intravenously. At 6.00pm on September 28th, respirations ceased permanently.' The patient died. Clinically cases of post hypoglycaemia encephalopathy have been reported in every age group, as frequent in children as in adults. - 'Darrow had 2 cases of convulsions and mental deficiency in children following hypoglycaemia.' Another similar case with coma for 17 days terminating in death reported by Lawrence et al.

23) Patients who carefully Manage Diabetes May Face Hidden Risks, By James s Hirsch, Wall Street Journal 29.6.1996. This describes a 26-year-old Insulin Dependent Diabetic Nurse, two months pregnant, who following diabetic coma, lost control of her car which battered off the road and crashed into a tree, killing her. Authorities estimate she was travelling at 73 miles per hour and there were no skid marks. She passed out and her foot hit the accelerator. Research studies estimate that between 4% and 13% of

the insulin dependent diabetic patients who die each year perish in hypoglycaemia related accidents. Case 95. Claim against insurers 2005 was a case uncomfortable for insurers and explains why W lied under oath in court and described diabetes claims as nonsense and hypoglycaemia as domestic violence and the court was deliberately misled by the witness W. Was this a case of perverted justice? Probably yes. P275 Victim was alive and comatose and unable to give history of events. The attendant will almost certainly be unreliable and be misleading. My ex-wife and daughter were in attendance and their evidence was unreliable and misleading in court cases heard when witnesses were under oath. Evidence Chap 14 - If hypoglycaemia is given as evidence courts are likely to be ignorant of the health condition and require experience of an expert witness. In the case of patient daughter Judge M relied on evidence from Hertfordshire Social Services which was unreliable. Patient believes the Social Worker was grossly negligent in public office and failed to recommend forensic evidence be obtained before contact hearing. If such had been available on the balance of probability the order would have been overturned on appeal. Cause likely to be Hertfordshire Social Services, Police, County Council as funders. The Official Solicitor was very disappointed that patient's daughter was not seen by a Child Psychiatrist or Psychologist as was recommended by Appeal Court Judges and patient would suggest this recommended action was not implemented due to his ex-wife's alleged narcist and determination to cover up her negligence along with the negligence of GP Dr A and bizarre cover up conduct of DW and SW (deceased). The Social Services report was unsafe, and diabetes dismissed without investigation and appointment of an expert witness to assist the court. Evidence: GP had patient removed from the Surgery GP Patient Listing in 1994 following evidence discovery and return of patient hypoglycaemia warning awareness signs and took out a High Court injunction order preventing local surgery contact or access in the local Parish Church Hall following GP having the vicar influenced to agree to such and deliberately deny patient NHS GP services until an alternative arrangement could be made. GP had dumped on patient a massive pile of clinical reference papers used as scaring technique to prevent contact with patient's daughter, to cover up her alleged gross medical negligence in public office, cause patient to suffer symptoms of PTSD injury requiring psychological counselling to overcome the trauma and deliberately misled patients ex-wife, his daughter, Social Services, her employer the NHS, the General Medical Council, and yet continues to practice as a GP in Oxon, on the balance of probability treating adults and children following her alleged abuse of patient and his daughter when aged 11 and not Gillick Competent. This was Munchausen Syndrome by Proxy used as a weapon in cover up of Gross Medical and Public Negligence in Office. Fear and Paranoia of Witness to Neurohypoglycopenia. Forensic Aspects of Hypoglycaemia' by Vincent Marks (2019) consists of 374 pages of text and 621 references going back to insulin discovery in 1921 by Banting, Best and Macleod and is a helpful fresh evidence and case study account of actual cases involving hypoglycaemia since the discovery of the health condition in 1922 in Toronto. When certain facts emerged patient's ex-wife as a witness patient believes became terrified that the truth of her negligence and failure to summons an ambulance to a diabetic emergency would come out and hid under the influence of fear and paranoia to cover up her conduct for failing to summons an ambulance. Precedent case law includes: 1940 - Joseph Wilder, J. Criminal Path. GP's in this instance covered up and there was no hearing. 1999 Padmore – Neurohypoglycopenic hypoglycaemia means patient is incapable of formulating intent. Identical to my experience when there was no intent. 1994 – Dr G's failure to treat hypo promptly patient believes was gross medical negligence and allegedly criminal misconduct. Sometimes differences in medical opinion occur in events of hypoglycaemia. C Peptide is now useful in forensic evidence in the event of problems and may be performed at A and E in an hypo emergency. Prima facie evidence suggests witness experienced fear and paranoia caused by mismanagement of treatment for hypopituitarism Addison's Disease, and failure to have annual biochemistry tests for T1 and T2 performed. P108 Spontaneous hypoglycaemia. Case 5.3 Non iatrogenic hypo. P 202 – C – peptide is useful in forensic examination along with BG hypo tests. February 1994 – blood glucose, C-peptide, glycogen, cortisol, growth hormone results should all have been performed on transfer to hospital and used as evidence in all court matters and were not. All evidence at the time and subsequently may be unsafe leading to a serious miscarriage of justice including marriage breakdown, contact with child aged 11 and cover up of medical and general negligence. P 203 – Hypopituitarism can cause hypoglycaemia as mentioned in cases in Turkey and India. Diabetic coma and death. Anatomical change can be noted up to 6 hours after death but no longer. P 256 – Death in bed cases when patient treated with human insulin are non-conclusive that human insulin instead of animal insulin treatment was responsible. 24) More research is needed. C-peptide provides further forensic evidence in adverse situations. Case 95, claim against insurer 2005 was incompatible for insurers. Possible reason why D W it is alleged lied to Police and when under oath in court and acted in a manner it is alleged to deliberately pervert justice in cover up. P 273 – Victim alive and comatose but unable to give history to attendant and will almost certainly be unreliable and misleading. C 14 – Courts claim ignorance in matters involving hypoglycaemia and rely on an expert witness. Case 95, claim against insurer 2005 was incompatible for insurers. Possible reason why D W it is alleged lied to Police and when under oath in court and acted in a manner it is alleged to deliberately pervert justice in cover up. P 273 – Victim alive and comatose but unable to give history to attendant and will almost certainly be unreliable and misleading. C 14 – Courts claim ignorance in matters involving hypoglycaemia and rely on an expert witness. • In first application in 1994 to have contact with patient's daughter aged 11 no expert witness was

present in court for cross examination. Court failed to understand expert witness reports placed before the court and failed to have an expert witness report prepared for patients' ex-wife to reflect her health condition of hypopituitarism and lack of hypo knowledge. Subsequent expert witness report prepared by expert Prof Shalott was not placed before the court. Dr G of The Health Authority in Manchester refused to attend court. The Social Services Report in 1994 and placed before the court was misconceived and unsafe for a court to rely on. 1933 Wauchope – Neuroglycopenic brain malfunction and neuroglycopenic automatism as described was witnessed by patient's ex-wife and daughter caused by hypoglycaemic unawareness by 20% overdose prescription of wrong insulin prescribed by GP's failure to identify problem over several years, failure to provide BG medical device testing equipment available on prescription from NHS to manage condition, assess problem issues, and correct problem.

25) Tort lies in a doctor's failure to act once the problem has been presented. Questions: It is believed, and alleged GP Dr A recognised her medical negligence and covered up this negligence by frightening patient by way of High Court Order preventing access to NHS GP practice medical facilities and NHS care and required prescribed medication, and in the application dumped hundreds of pages of clinical reports on hypoglycaemia and diabetes to frightened patient by evidence volume? This was read with due diligence and along with other clinical text reading used in diabetes and insulin research to enhance patients understanding of hypoglycaemia. The time of insulin discovery by Banting, Best and Macleod, in 1922 and before and subsequently leading to the publication of diabetes information on website www.dri-ft.co.uk to share and help other patients and carers with diabetes and the medical profession.

26) The Department of Health and research disclosed that 600 Addison's Disease patients were NHS registered in 2000 and this has now risen to 10,000 patients. It's estimated that many more are living with mental health issues (undiagnosed Addison's Disease) that could be treated if only there was a wider understanding of the prevalence of this condition. It has been suggested that 50% of Addison's Disease patients in the UK are undiagnosed. Is this is an area of concern for the NHS in xxxxxx?"

27) Linked to the above, "The sadly high proportion of COVID-19 deaths in diabetic patients, and identified as Clinical Endocrine patients, has been troubling. Is the NHS in xxxxxx aware of the disproportionality and is Healthwatch xxxxx aware of any work being done to address this?"

28) **NOTE 1)** - The 600-patient statistic was identified in an Expert Witness Clinical Report on Hypopituitarism and Addison's Disease. In 2000 HM Courts in Manchester and Trafford refused to allow Clinical Endocrine Evidence in this report to be made available to the Court to enable a better understanding of the long term health condition. This followed from alleged perverted Justice at RCJ London 27 June 1995 when Dr ALA, HH GP Practice, St Albans, England failed to a) Diagnose Hypoglycaemia Unawareness (Worlds 1st Hypo Event Toronto, Canada 1922 ie 100 year's ago and b) failed to diagnose PTSD injury associated with near fatal Hypo event in St Albans 1994 involving Diabetes AND Addison's Disease. Subsequently alleged perverted justice has been identified RCJ London, 27 March 1996, and involving a child.

References

Addison's Disease

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3. Hormones of the Adrenal Cortex; Hormonal Control of Ovarian Function, 1974, Searle Diagnostic – Craig, Siddique, Mills

Diabetes

4. A History of recurrent Severe Hypoglycaemia in Adults with Insulin-Dependent Diabetes is associated with Brian Atrophy, by Perros et al, Edinburgh, November 1996. 11 patients with a history of 5 or more severe episodes of hypoglycaemia were scanned by MRI. 9 patients had abnormal scans. Two types of abnormality were observed namely high intensity rounded lesions distributed in the periventricular white matter and cortical atrophy.'
5. Severe Hypoglycaemia and cognitive impairment in diabetes, by Deary, Frier, Edinburgh, BMJ, 28.9.1996'The Average cerebral impact of several episodes of severe hypoglycaemia over a period of between 5 and 15 years is either mild or negligible. For a few individuals, with vulnerability factors which as yet remain obscure, brain function may be permanently and importantly affected.'
6. Severe deterioration in Cognitive Function and Personality in Five Patients with Long-standing Diabetes: A Complication of Diabetes or a Consequence of Treatment? By Gold et al, Pittsburgh USA, Diabetologia 1993, 36
7. Permanent Neuropsychological impairment after recurrent episodes of severe hypoglycaemia in man. Wredling et al. Sweden and Norway. Diabetologia 1990, 33.3
8. Cognitive dysfunction in adults with type 1 (insulin-dependent) diabetes mellitus of long duration: effects of recurrent hypoglycaemia and other chronic complications, by Ryan et al, Pittsburgh USA, Diabetologia 1993, 36. 'A Single episode of moderate hypoglycaemia can readily produce a transient disruption in cognitive functioning. Studies using the insulin-glucose clamp technique have repeatedly demonstrated that when plasma glucose levels are experimentally reduced below 2.8mmol/l both diabetic and non-diabetic subjects often show a marked decline in mental efficiency. 'Although the excitotoxic hypothesis of neuronal necrosis is based upon animal studies in which a single episode of very severe hypoglycaemia is maintained for at least 30 minutes it is not inconceivable that repeated episodes of moderate hypoglycaemia would, over time, have cumulative effect that leads to significant neuronal damage in humans.' 'Subjects were asked if they ever had an episode of hypoglycaemia so severe that you sought medical help (emergency room doctor).

Whenever possible, estimates were corroborated by another family member, and by review of medical records. 'Moreover clinical case reports have indicated that a single episode of severe hypoglycaemia may produce a variety of transient of permanent neurological disorders including hemiplegia, amnesia and coma while neuropathological studies have demonstrated the presence of hypoglycaemic associated neuronal necrosis in the cortex, hippocampus, and basal ganglia of humans and animals.''Neurophysiologic and neuro imaging studies have demonstrated that diabetic adults with a history of poor metabolic control have clear evidence of brain dysfunction. This has been demonstrated most convincingly by Dejgaard et al who studied 20 middle aged diabetic adults, all of whom had evidence of peripheral neuropathy. Abnormal brain stem auditory evoked potentials were found in 40% of these subjects, and abnormal magnetic resonance imaging results (characterised as lesions 2-10mm in size) were found in 69% of the diabetic subjects.'

9. Intensified conventional insulin treatment and neuropsychological impairment, by Reichard et al, Sweden, BMJ 7.12.1991, 303. 'Episode hypoglycaemia might cause permanent brain damage.'
10. Severe Hypoglycaemia and intelligence in adult patients with insulin- treated diabetes, by Dreary et al, Edinburgh and Aberdeen, Diabetes February 1993, 42.
11. Cumulative cognitive impairment following recurrent severe hypoglycaemia in adult patients with insulin- treated diabetes mellitus, by Langan et al, Edinburgh, Diabetologia 1991, 34.'A 'Mild' episode of hypoglycaemia was defined as one which was self treated during which there had been no alteration in conscious level, while a 'severe' episode required external assistance for recovery, whether or not loss of consciousness had occurred.'
12. Effect of Long-Term Glycaemia Control on Cognitive Dysfunction, by Lincoln et al, Nottingham, Diabetes Care, June 1996, 19.6.
13. Complications in IDDM are caused by elevated blood glucose level: The Stockholm Diabetes Intervention Study (SDIS) at 10-year Follow up, by Reichard et al, Stockholm, Upsala, Sweden, Diabetologia 1996, 39. 'All Patients were followed up with regard to mortality, ketoacidosis, body mass index and severe hypoglycaemia (requiring help from someone else). The effects of severe hypoglycaemia on cognitive function were followed with a battery of computerised tests.' 'During the last 2.5 years of the study eight patients from each group needed emergency hospital care and intravenous glucose. Five patients in the ICT group and two patients from the ST group received subcutaneous or intramuscular injections of glucogen outside of hospital during the same period.'
14. Recurrent Severe Hypoglycaemia and Cognitive Function in Type 1 Diabetes, by Gold et al, Edinburgh, Diabetes Medicine 1993; 10.
15. Neurobehavioural Complications of Type 1 Diabetes, Examination of Possible Risk Factors, by Ryan, Pittsburgh, USA, Diabetes Care, January 1988, 11. 'A very different set of risk factors has been identified in diabetic adults. Perhaps the most potent of these is profound hypoglycaemia. After a hypoglycaemia episode, the diabetic patient may develop intellectual impairments that range from merely a slight decrease in learning efficiency or eye hand coordination to severe impairment in virtually all cognitive domains.'
16. Effects of Intensive Diabetes Therapy on Neuropsychological Function in Adults in the Diabetes Control and Complications Trial by the DCCT Research Group, Bethesda, USA, Annals of Internal Medicine, 5.2.1996, 124. 'Although animal studies have provided the most compelling evidence for hypoglycaemia induced brain dysfunction, investigators of several recent cross sectional studies have concluded that five or more episodes of severe hypoglycaemia may be associated with mild cognitive impairment, as measured by performance on neuropsychological test. 'Severe hypoglycaemic episodes were defined as those in which the patient had incapacity sufficient to require the assistance of another person. 'Approximately one third of severe hypoglycaemic episodes involved coma seizure, or suspected seizure.' 'In the intensive treatment group, 16 severe hypoglycaemic episodes involving coma, seizure or suspected seizure occurred per 100 patients – years compared with 5 such episodes in the conventional treatment group.'
17. Post hypoglycaemic Encephalopathy, case reports, by George M Jones, M.D. American Journal of Medical Services, 1947, 213 'The Clinical entity post hypoglycaemic encephalopathy, has been previously reported under headings of synonyms such as fatal hypoglycaemia, mental deterioration associated with convulsions and hypoglycaemia, cerebral damage from insulin shock, irreversible or hypoglycaemic insulin coma, fatal hyper insulinism with cerebral lesions due to pancreatic adenoma, and post hypoglycaemic coma or syndrome, and psychiatric complications of hypoglycaemia in children. Even before the introduction of insulin, Joslin recognised that hypoglycaemia was a very serious factor in the treatment of diabetes.' In 1932′ Terplan reported the case of a 16 year old boy who did not regain consciousness for 3 days after insulin shock, the blood sugar levels being normal for these 3 days. Post-mortem examination showed extreme oedema of the brain and destruction of ganglion cells.' Wilder wrote:' a feature of this type of coma (hypoglycaemia) that is very characteristic is its rapid termination when glucose is administered.'

    Case 1 – 26 year old white man, diabetic for 4 years, September 8 1943, found unconscious, perspiring profusely and unresponsive, transferred to hospital. 'The patient became quite unruly and violent, struggling constantly, having to be restrained, and pulled out the intravenous needle after only 300cc of 5% glucose had been administered.' There was no change in the clinical course during the interval except that the patient screamed irrationally at times.' 'Thereafter the Patient improved and apparently had an uneventful course after proper regulation of his diabetes.'

    Case 2 – 55 year old white male, diabetic since 1938, was admitted to st Paul's Hospital in diabetic coma on February 13th 1945 at 12 noon having been found unresponsive at 10.00 am, but was alright at 7am. 10% glucose solution was started intravenously immediately upon his arrival and was continued until the patient had received 4000cc by 10.45pm. The Patient remained semi comatose on March 1st until 9.00pm at which time he appeared very restless, got out of bed, struggled with the nurses, and had alternating intervals of crying out irrationally and of being quiet. The patient remained about the same until the 16th March when he became weaker, his temperature began rising, and signs of pneumonia appeared in the lungs. He

died on March 18th at 8.20pm.

Case 3 – 7 year old white male, diabetic since January 1943, admitted to Baylor University hospital at 4.30pm on September 27 1945 following convulsions. As the patient continued to have convulsions and was comatose it was decided to bring the child to Dallas. The patient was admitted to hospital upon arrival.' The patient was given 70cc of 50% glucose and 1000cc of 10% glucose intravenously. At 6.00pm on September 28th, respirations ceased permanently.' The patient died.

Clinically cases of post hypoglycaemia encephalopathy have been reported in every age group, as frequent in children as in adults.

'Darrow had 2 cases of convulsions and mental deficiency in children following hypoglycaemia.' Another similar case with coma for 17 days terminating in death reported by Lawrence et al.

It is recommended that the term post hypoglycaemic encephalopathy be used for this very definite clinical entity. Members of the medical profession should be aware of this very serious complication of hypoglycaemia and combat any prolonged low blood glucose level vigorously.

18. Patients who carefully Manage Diabetes May Face Hidden Risks, By James s Hirsch, Wall Street Journal 29.6.1996. This describes a 26 year old insulin dependent diabetic nurse, two months pregnant, who following diabetic coma, lost control of her car which battered off the road and crashed into a tree, killing her. Authorities estimate she was travelling at 73 miles per hour and there was no skid marks. She passed out and her foot hit the accelerator. Research studies estimate that between 4% and 13% of the insulin dependent diabetic patients who die each year perish in hypoglycaemia related accidents.
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