Altered Consciousness in General

Dr. Michael E. O’Brien
Dr. Frank S. Drongowski

Definitions

- **Confusion** - a mental state marked by disturbances in comprehension, understanding, and resulting in bewilderment
- **Delirium** - a mental state marked by delusions, restlessness, and incoherence

Comparison

- Unlike unconsciousness, in altered consciousness the patient’s airway is patent and all the protective reflexes are present and you can talk to the patient
- Prompt attention can prevent unconsciousness

Causes

- **Drug Overdose** – most common ones are alcohol, sedatives, and insulin
- **Hyperventilation** – the most common non-drug cause
- **Hypoglycemia** – fairly common and leads to unconsciousness
- **Hyperglycemia, TIA, CVA, and Hypothyroidism** are rare but much more severe

Management

- **P** - Position - Comfortable
- **ABC’S** - Not as Important
- **D** - Definitive Treatment - give Oxygen, take vital signs, determine diagnosis, and treat accordingly
- **Stop Unconsciousness**

Conditions

- **Diabetes Mellitus**
- **Thyroid Disease**
- **Cerebrovascular Accident (Stroke)**
Diabetes Mellitus

Definition
A disease complex with metabolic and vascular components characterized by hyperglycemia from lack of insulin. Complications include micro-vascular disease, especially of the kidney and eye, and clinical neuropathies.

Incidence
• Affects 20 million Americans
• Approximately half are Unaware
• Detection is Key
• 90-95% have NIDDM (Type II)
• Genetic link - especially NIDDM
• Third leading cause of Death in US

Types
• Type I - Insulin dependent diabetes mellitus (IDDM)
• Type II - Non-insulin dependent diabetes mellitus (NIDDM)
• Type III - Other types
• Gestational Diabetes

Comparison
Type I
• Sudden onset
• Under 40 years
• No obesity factor
• No insulin secretion
• Strong genetic influence
• Ketoacidosis

Type II
• Gradual onset
• Over 40 years
• Obesity factor
• Can secrete insulin but lack receptors
• Some genetic influence
• None

History
• Are you thirsty most of the time?
• Do you void often even wake up at night?
• Are you always hungry and eating but still losing weight?
• Do you always feel tired?
• Do you have numbness?
Cardinal Signs
- Polydipsia
- Polyuria
- Polyphagia
- Weight Loss
- Loss of Strength
- Paresthesias

Dialogue
- What type of diabetic are you?
- What medicines are you taking?
- How often do you monitor your blood sugar?
- How well are you controlled?
- Have you ever had a fainting spell?
- Have you ever been to the emergency room or stayed in the hospital?

Detection
- **Tremendously Important**
- **Fasting Blood Sugar** - blood glucose level > 140 mg/dl on two or more occasions
- **Two - Hour Postpranial** - glucose load after night of fasting - 2 hours later > 200 mg/dl

Management
- Control of glucose level is goal
- Life-long compliance
- Diet and Physical activity
- Oral hypoglycemics
- Insulin - conventional, multiple injections, continuous infusion (pumps)
- Pancreatic Transplantation

Types of Insulin
- Regular - rapidly absorbed (before meals)
- NPH and Lente - intermediate action (before bed)
- Ultralente - long action
- Combination - regular can be mixed with others for multiple uses
- Human, Pork, and Beef - purified extracts now available

Dental Considerations
- Procedures where fasting is not necessary just have patient take normal doses of medications and eat a normal breakfast
- If fasting is necessary then get a consultation with their physician
- Be very careful with Type I and bad Type II's and watch Infection
Hyperglycemia

- Probably not an emergency that you will see in your office because it takes hours to days to develop
- However chronic long term hyperglycemia has disastrous consequences on the body

Complications

- Increase in the Arteriosclerosis that causes Heart Disease and Stroke
- Diabetic Retinopathy causes Blindness
- Diabetic Nephropathy causes Renal Failure
- Diabetic Neuropathy causes Numbness
- Diabetes causes Early Death

The Problem for us in the Dental Office is Hypoglycemia

- Usually Type I or bad Type II and they take their injectable insulin and think they need to fast
- Common emergency in dental office
- Focus is to identify the problem and prevent them from losing consciousness because then it becomes a much bigger emergency

Early Symptoms

- Pallor
- Perspiration
- Nausea
- Tachycardia
- Change in Behavior
- Looks familiar but even more time to treat and you better

Early Treatment

- P - Position - Comfortable
- ABC’S - check these but not nearly as important (conscious)
- D - Definitive Treatment - give oxygen if available and give Oral Sugars (orange juice, coke, etc.) and take vital signs. The patient should recover quickly.
### Late Symptoms
- Bizarre behavioral problems
- Hypotension
- Loss of Consciousness
- Seizure Activity
- They probably will not wake up in your office
- Better treat Early

### Unconsciousness
- **P** - Position - Supine with Legs Elevated
- **A** - Airway - Head tilt and Chin lift
- **B** - Breathing - If so give Oxygen
- **C** - Circulation - Check at least signs of

### Unconsciousness
- **D** - Definitive Treatment – Continue airway maintenance and Oxygen, take vital signs and Call 911. If available give Glucagon 1 mg I.M. in the deltid and protect the patient from seizures. Patient needs 50% glucose I.V. slowly while being monitored in hospital

### Questions?