

## **Supplementary material**

### **1. A practical clinical definition of epilepsy**

Epilepsy was defined conceptually in 2005 as a disorder of the brain characterized by an enduring predisposition to generate epileptic seizures. This definition is usually practically applied as having two unprovoked seizures >24 h apart. The International League Against Epilepsy (ILAE) accepted recommendations of a task force altering the practical definition for special circumstances that do not meet the two unprovoked seizures criteria. The task force proposed that epilepsy be considered to be a disease of the brain defined by any of the following conditions: (1) At least two unprovoked (or reflex) seizures occurring >24 h apart; (2) one unprovoked (or reflex) seizure and a probability of further seizures similar to the general recurrence risk (at least 60%) after two unprovoked seizures, occurring over the next 10 years; (3) diagnosis of an epilepsy syndrome.

Modified from: [164].

## **2. Stages of childhood development**

- New-born infant or neonate: child under 28 days of age
- Infant: 0-1 year of age
- Toddler child: 1-2 years of age
- Pre-schooler child: 2-6 years of age
- School-aged child: 6-12 years of age
- Adolescent: 12-18 years of age

Modified from [165].

### **3. Criteria for the diagnosis of diabetes**

Diabetes may be diagnosed based on plasma glucose criteria, either the fasting plasma glucose (FPG) value or the 2-h plasma glucose (2-h PG) value during a 75-g oral glucose tolerance test (OGTT), or A1C criteria

- FPG  $\geq 126$  mg/dL (7.0 mmol/L). Fasting is defined as no caloric intake for at least 8 h.\*  
OR
- 2-h PG  $\geq 200$  mg/dL (11.1 mmol/L) during OGTT. The test should be performed as described by WHO, using a glucose load containing the equivalent of 75 g anhydrous glucose dissolved in water\*  
OR
- A1C  $\geq 6.5\%$  (48 mmol/mol). The test should be performed in a laboratory using a method that is NGSP certified and standardized to the DCCT assay\*  
OR
- In a patient with classic symptoms of hyperglycemia or hyperglycemic crisis, a random plasma glucose  $\geq 200$  mg/dL (11.1 mmol/L).

DCCT, Diabetes Control and Complications Trial; FPG, fasting plasma glucose; OGTT, oral glucose tolerance test; WHO, World Health Organization; 2-h PG, 2-h plasma glucose. \*In the absence of unequivocal hyperglycemia, diagnosis requires two abnormal test results from the same sample or in two separate test samples.

Modified from [148].

#### **4. Management of Neonates, Infants, and Children with a Persistent Hypoglycemia Disorder**

4.1. For neonates with a suspected congenital hypoglycaemia disorder and older infants and children with a confirmed hypoglycemia disorder, we recommend that the goal of treatment be to maintain a PG concentration  $>70$  mg/dL ( $3.9$  mmol/L). GRADE 1++00.

4.2. For high-risk neonates without a suspected congenital hypoglycemia disorder, we suggest the goal of treatment be to maintain a PG concentration  $>50$  mg/dL ( $>2.8$  mmol/L) for those aged  $<48$  hours and  $>60$  mg/dL ( $>3.3$  mmol/L) for those aged  $>48$  hours. GRADE 2+000.

4.3. We recommend an individualized approach to management with treatment tailored to the specific disorder, taking into account patient safety and family preferences. Ungraded best practice statement

Modified from [23].

Short-term treatment of hypoglycemia consists of an intravenous (IV) bolus of dextrose 10% 2.5 mL/kg. The critical sample should be drawn before the glucose is administered. After the bolus is administered, an IV infusion that matches normal hepatic glucose production (approximately 5-8 mg/kg/min in an infant and about 3-5 mg/kg/min in an older child) should be continued. This should be adjusted to maintain the plasma glucose level at more than 3 mmol/L. Children with hyperinsulinemia may have much higher needs. Glucagon infusion at rates of 0.005-0.02 mg/kg/h should be used as a temporary treatment in children with hyperinsulinism in whom adequate amounts of dextrose cannot be given. It can cause a rash and decreased appetite if used over the long term.

Modified from [166] and [167].