MCQs Neonatal cranial

1. **Imaging of the neonatal brain can be done with neonatal cranial ultrasound (CUS) or magnetic resonance imaging (MRI)**
   a) CUS is better than MRI for preterm babies
   b) MRI is better than CUS for preterm babies
   c) CUS is better than MRI for term babies
   d) Both methods have advantages and disadvantages, and there is no agreement on which modality is better for imaging the neonatal brain

2. **Neonatal cranial ultrasound is used**
   a) To assess brain maturation and structural and acquired anomalies
   b) To screen for hemorrhage in term babies
   c) To verify brain abnormalities demonstrated by magnetic resonance imaging
   d) Only when there are clinical signs of brain abnormalities (eg seizures in the newborn)

3. **The standard planes obtained though the anterior fontanelle are**
   a) 5 sagittal planes
   b) 6 coronal planes
   c) 6 coronal and 5 sagittal planes
   d) 5 coronal and 6 sagittal planes

4. **During neonatal cranial ultrasound TI values should be kept lower than the maximum recommended by BMUS and ECMUS because**
   a) The impedance of the fontanels are difficult to measure and calculation of TI may suffer from large variation in impedance
   b) The model for calculating TI ignores transducer self heating and there is experimental evidence that this can occur during neonatal cranial ultrasound
   c) Calculated TI values may be wrong (up to a factor of 3-4) when compared with in vivo temperatures
   d) The brain is more sensitive to heating than other organs

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Correct answers:

1d: Both methods have advantages and disadvantages, and there is no agreement on which modality is better for imaging the neonatal brain
2a: To assess brain maturation and structural and acquired anomalies
3c: 6 coronal and 5 sagittal planes
4b The model for calculating TI ignores transducer self heating and there is experimental evidence that this can occur during neonatal cranial ultrasound