

Appendix 3. Formula to estimate subdural haemorrhage volume

$$\frac{[4/3 \pi (6.85)^3 - 4/3 \pi (6.85-r)^3]}{8}$$

8

We used the longitudinal diameter (temporal-temporal): 137mm or 13.7cm (6.85cm radius).

r is the maximum thickness of the subdural haemorrhage.

For example, for a subdural haemorrhage with a thickness of **7.7mm** (i.e. 0.77cm):

$$4/3\pi(6.85)^3 = 1346.35728$$

$$4/3\pi(6.85 - \mathbf{0.77})^3 = 4/3\pi(6.08)^3 = 941.45452$$

$$1346.35728 - 941.45452 = 404.90276$$

$$404.90276 / 8 = 51\text{cm}^3 \text{ (i.e. } \mathbf{51ml})$$

For example, for a subdural haemorrhage with a thickness of **3.5mm** (i.e. 0.35cm):

$$4/3\pi(6.85 - \mathbf{0.35})^3 = 4/3\pi(6.5)^3 = 1150$$

$$1346 - 1150 = 196$$

$$196 / 8 = \mathbf{25ml}$$

For example, for a subdural haemorrhage with a thickness of **6mm** (i.e. 0.6cm):

$$4/3\pi(6.85 - \mathbf{0.6})^3 = 4/3\pi(6.25)^3 = 1023$$

$$1346 - 1023 = 323$$

$$323 / 8 = \mathbf{40 ml}$$