What is brain compliance? This question would be simple to answer if the brain were a closed balloon. We need to inflict change in volume and measure the pressure response. The trouble with this approach is that in the brain, part of the compartmental volumes are 'trapped' inside the craniospinal space, such as brain tissue and, over short periods, slowly circulating cerebrospinal fluid (CSF). However, in contrast, cerebral blood flows through the system at a high rate. Consequently, any attempt to inflict cerebrospinal volu- metric change easily leads to compensation, according to Monro-Kellie doctrine, by the migration of a certain amount of blood from the brain venous pool. Therefore, introducing a change in the intracerebral volume by bolus injection of CSF or an expanding intraventricular balloon leads primarily to the measurement of brain venous compliance. Apart from venous compliance, the CSF pool also has a limited space for compensation by expanding into the lumbar space against venous plexi inside the lumbar channel.

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