Conclusions

The division in the collateral sulcus was observed in a large sample of brains and its posterior limit follows a normal distribution (Fig. 8). The probability map of the lateral bank of the anterior collateral sulcus (Fig. 9) may provide the anterior border of the parahippocampal cortex, a method by which to localize peaks of activation in brain imaging studies. The lateral bank of the collateral sulcus may provide the lateral border of the entorhinal, perirhinal and parahippocampal cortices [2]. Further studies are needed to confirm the precision of this landmark in defining cytoarchitectonic fields. However, the need for an anatomic distinction amongst medial temporal lobe structures is imperative since numerous studies have shown that the entorhinal, perirhinal, and parahippocampal cortices can play roles in memory, independent from that of the hippocampus and from each other [7, 8]. A probability map, based on landmarks such as the one studied here, can provide higher accuracy in determining the location of various sites of functional activation within the medial temporal lobes.

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References