Supplemental Figure 1

Series of T1-weighted coronal images for each of each of five patients with limited hippocampal lesions (K.E., L.J., R.S., G.W., and J.R.W) and one control. The sections proceed in 7mm intervals from the temporopolar cortex in the top section (with the exception of GW, whose top section is at the level of the perirhinal cortex) caudally through the splenium of the corpus callosum in the bottom section. The left side of the brain is on the right side of each image.

As described by Insaasti et al. (1998), temporopolar cortex (TP) extends medially from the inferotemporal sulcus to the fundus of the temporopolar sulcus. Temporopolar cortex extends rostrally from the tip of the temporal pole caudally to the limen insula (LI), which approximates the border between the temporopolar cortex and perirhinal cortex. Caudal to temporopolar cortex, the collateral sulcus (CS) is the most important structure for the identification of medial temporal lobe cortices. At its most rostral extent, the collateral sulcus is surrounded entirely by perirhinal cortex (PR). Caudally, entorhinal cortex (EC) extends from the midpoint of the medial bank of the collateral sulcus to the subiculum, while perirhinal cortex extends laterally from the midpoint of the medial bank of the collateral sulcus to the inferotemporal cortex. 2 mm caudal to the disappearance of the gyrus intralimbicus of the hippocampus (H), the collateral sulcus is
surrounded by parahippocampal cortex (PH). The splenium of the corpus callosum (SP) approximates the posterior border of the parahippocampal cortex with the anterior occipital cortex.

The top section (1) shows the temporopolar cortex. None of the hippocampal patients has damage evident at this level. For L.J., only the tip of the temporal pole is visible at this level. For G.W., the perirhinal cortex, not the more rostral temporopolar cortex, appears in this section.

The second section (2) shows the perirhinal cortex surrounding the collateral sulcus and the limen insula, which is the region where the cortex of the insula is continuous with the inferior cortex of the frontal lobe. The limen insula is evident only on the right side in the control brain and in G.W. and on the left side in J.R.W. In the other brains it appears caudal to this section. The third section (3) shows the collateral sulcus and surrounding perirhinal and entorhinal cortices. The fourth section (4) shows the anterior hippocampus and the adjacent perirhinal and entorhinal cortices. G.W. has extensive damage to the hippocampus at this level. J.R.W. has damage to the hippocampus on the left. K.E.’s hippocampal damage is not evident at this level, but small bilateral lesions in the basal ganglia secondary to toxic shock syndrome are apparent. The lateral temporal lobe appears normal in all cases, and its volume is always within 1.2 SDs of the volume of the control mean.

The fifth section (5) shows the hippocampus and the adjacent perirhinal and entorhinal cortices. Extensive hippocampal damage is evident at this level in K.E., R.S., G.W., and J.R.W. The collateral sulcus and the surrounding perirhinal and entorhinal cortices appear normal in all the hippocampal patients.

The sixth section (6) shows perirhinal cortex on the lateral bank of the collateral sulcus, near the perirhinal/parahippocampal cortex border. At this level, damage is evident in the hippocampal region of all the hippocampal patients. Normal-appearing perirhinal cortex is evident in L.J. and R.S., and normal-appearing parahippocampal cortex is evident in G.W. In J.R.W., normal perirhinal cortex is evident on the right side, and normal parahippocampal cortex is evident on the left. For K.E., the cortex adjacent to the hippocampus (near the perirhinal/parahippocampal cortex border) also appears to be normal.
The seventh section (7) shows the hippocampus and the collateral sulcus, surrounded by parahippocampal cortex. The patients have moderate damage to the hippocampus at this level (more severe damage in J.R.W.), but the parahippocampal cortex appears entirely normal. The warping artifact in the right lateral temporal lobe of G.W. on this section, as well as on sections 8 and 9, does not interfere with the assessment of his damage.

The eighth section (8) also shows the hippocampus and the parahippocampal cortex surrounding the collateral sulcus. For L.J. and K.E., moderate hippocampal damage is evident at this level. The collateral sulcus and surrounding parahippocampal cortex appear normal in all the hippocampal patients.

The ninth section (9) shows the splenium of the corpus callosum, which defines the caudal border of parahippocampal cortex. At this posterior level, parahippocampal cortex is evident in all patients. The hippocampus is evident at this level only in L.J., and it appears normal.

Reference