

Neurite outgrowth through lesions of neonatal opossum spinal cord in culture

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The aim of these experiments was to analyze neurite outgrowth during regeneration of opossum spinal cord isolated from *Monodelphis domestica* and maintained in culture for 3-5 days. Lesions were made by crushing with forceps. In isolated spinal cords of animals aged 3 days, neurites entered the crush and grew along the basal lamina of the pia mater. Growth cones with pleiomorphic appearance containing vesicles, mitochondria and microtubules were abundant in the marginal zone, as were synaptoid contacts with active zones facing basal lamina. In preparations from animals aged 11-12 days, the lesion site was disrupted and contained only degenerating axons, debris and vesicles. Axons and growth cones entered the edge of the lesion but did not extend into it. Lesions in young animals extended over distances of more than 1 mm and contained no radial glia. The damaged area in older preparations was restricted to the crush site with normal astrocytes, oligodendrocytes and neurons immediately ad