



Figure 5 Mitochondria derived from hESC-MSCs enhanced the recovery of experimental periodontitis in mice. (a) Diagram of the animal experimentation process. The injection position was in the palatal gingival sulcus of the first maxillary molar, which was indicated by the blue note. (b) Gingival tissue sections stained with TUNEL and DAPI. Scale bar, 20 μm. (c) Relative mRNA expression of NLRP3, IL-1β, and TNF-α (n=5). (d) The substructure of mitochondria of gingival tissues observed by TEM. The mitochondria from Group CTRL show swelling, enlargement and loss of cristae. The mitochondria from Group MITO are smaller and have a larger aspect ratio. The double membrane structure and cristae are clear. Scale bar, 2 μm (upper) and 500 nm (lower). The mitochondrial count, length/width ratio, and area were calculated (n=3). Data were presented as means ± SEM. Unpaired two-tailed Student's t-tests were conducted. *p < 0.05, **p < 0.01, ***p < 0.001. DAPI: 4',6-diamidino-2-phenylindole; TUNEL: TdT-mediated dUTP nick end labeling; TEM: transmission electron microscopy; NLRP3: NOD-like receptor family pyrin domain-containing 3; SEM: standard error of mean.