Let $T \in \mathcal{L}(\mathbb{C}^3, \mathbb{C}^3)$ be defined by $T(z_1, z_2, z_3) = (z_2, z_3, 0)$. Prove that T does not have a square root. More precisely, prove that there does not exist an $S \in \mathcal{L}(\mathbb{C}^3, \mathbb{C}^3)$ satisfying $S^2 = T$.