

ANTIINFECTION TREATMENT OF POLYURETHANE SURFACE BY  
COLLAGEN-RIFAMPICINE<sup>R</sup> COMPOSITE

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Polyurethane (PU) surface of a transcutaneous energy transmission(TET) coil, which is implanted into a subcutaneous pouch for a total artificial heart (TAH), was coated by a type I atelocollagen and Rifampicine<sup>R</sup> composite to prevent infection, which frequently occurs through the interfacial space between the tissue and the device.

The obtained specimen after 7 weeks from a TET coil placed in a dorsal subcutaneous pouch of a dog revealed non-infected but well attached dermal tissue without specific down-growth around the TET coil surface at the pouch-orifice area. The TET coil implanted in the pouch was well adhered to the subcutaneous membrane. The collagen matrix seemed to have provided a favorable environment for the regenerating dermal tissue to obstruct the interfacial space. The coated collagen-antibiotics composite was degraded.

Keywords: Antiinfection, Transcutaneous device, Collagen, Rifampicine, Composite, Polyurethane