

Comparison between ethyl-cyanoacrylate and conventional suture for the closure of skin incisions in rabbit (*Oryctolagus cuniculus*) [Comparación entre etil-cianoacrilato y sutura convencional en el cierre de incisiones de piel de conejo (*Oryctolagus cuniculus*)]

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The advantages of cyanoacrylate based adhesives for use in cutaneous wound closure has been demonstrated, but few studies reporting the use of ethyl cyanoacrylate nationwide. The objective was to compare morphological aspects of healing in rabbit skin between ethyl-cyanoacrylate and suture. We used 10 adult male rabbits divided into 2 groups of 5 animals, the Center for Experimental Surgery, Universidad de La Frontera, Chile. The experimental group was subject to two incisions, one at each side of the dorsum of the thorax, 4 cm long, spanning epidermis and dermis. The incision was closed with ethyl right-cyanoacrylate, intradermal left with point of polyglycolic acid. Biopsies were taken at days 7, 14 and 21 days postoperatively. At day 7, the incision treated with ethyl cyanoacrylate presented a mild inflammatory reaction with moderate infiltration of PMNs. Suture biopsies showed a more advanced stage of regeneration, without presenting epidermal development. At day 14, the incisions treated with ethyl cyanoacrylate were in the final phase of the inflammatory stage, while suture biopsies were already in proliferative stage. At day 21, closing both types were remodeling stage, with thicker epidermis and basal lamina formed. The dermis showed irregular dense connective tissue, poor hair follicles and sebaceous glands. Ethyl-cyanoacrylate as Skin Adhesive is a good alternative use, showing adequate biocompatibility. Featuring a moderate inflammatory reaction, limited and of short duration dermal level. The scar achieves better cosmetic results regarding the incisions closed with sutures.

Consideration should be limited to use low-tension sites not exposed to movements.

Ethyl cyanoacrylate

Healing

Rabbit

Suture