Registered study in AnimalStudyRegistry.org
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Comparison of the levels of metalloproteinases and their tissue inhibitors in serum and fascia in four methods of midline laparotomy closure: standard, small bites, reinforced tension line, and onlay mesh (absorbable and nonabsorbable).

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Summary

The most used approach in open surgery for hernias, whether scheduled or emergency, is midline laparotomy (LM), since it allows a fast approach with less bleeding, can be extended, and allows better exposure and comfort for the surgeon. Like any medical procedure, this approach is not exempt from complications, even when the findings of laparotomy are negative. IH after midline laparotomy is a postoperative complication of considerable concern due to its frequency, associated morbidity, and economic impact on the health system. This study aims to establish evidence of the influence of the type of abdominal wall closure on the healing process and its probable influence on the healing process of laparotomy. To achieve this objective, the levels of MMPs and TIMPs in blood and tissue will be evaluated. The results obtained are expected to guide surgical interventions and contribute to the development of more effective strategies to reduce the complications associated with incisional hernias.

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