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Hernia Mesh Repair of the Anterior Abdominal Wall and Antibiotic Chemoprophylaxis: Multiple Doses of Antibiotics Failed to Prevent or Reduce Wound Infection

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Abstract
Background: Mesh repair of the anterior abdominal wall hernias is a popular technique and commonly accepted among the majority of surgeons. The technique used most frequently today is the free tension technique. It is uncertain whether antibiotic prophylaxis is necessary to prevent postoperative wound infection, especially when a foreign body like a polypropylene mesh is used.
Methods: We have studied retrospectively the patients who received surgical treatment in our department for anterior abdominal wall hernia during the period of January 1995 - December 2004. Patients were divided into 3 groups based on the doses of antibiotics administered.
Results: In 780 out of 1245 cases, a mesh of polypropylene was used. In our sample, we excluded 221 patients due to diseases that made the use of antibiotics necessary. We have studied the frequency of superficial and deep infections in correlation with the use of antibiotics (cephalosporin of second generation or a combination of ampicillin plus sulbactam).
Conclusion: No difference was observed in the incidence of surgical trauma infection in relation to the duration and the doses of antibiotic cover. The wound infection rate in the current study does not support the use of multiple doses of antibiotics, as this rate does not differ from the rates of infection reported in the literature. Further studies are needed to clarify if antibiotic chemoprophylaxis with one dose or no chemoprophylaxis should be recommended.
Key words: hernia, mesh repair, wound infection, chemoprophylaxia

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