

### **Conversion in laparoscopic cholecystectomy for acute cholecystitis**

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#### **Abstract**

**Introduction:** By definition, conversion means giving up laparoscopic surgery and continuing the operation with open, conventional surgery no matter the reason, nor the moment of the operation.

**Purpose:** To evaluate the causes and the moment of conversion, the technique used to perform the cholecystectomy after conversion, analysing the experience of the surgical team in deciding the moment of conversion.

**Method:** A retrospective study performed on patients which underwent a laparoscopic operation for acute cholecystitis between January 1st 2004 – December 31st 2007. Clinical examination, biological parameters, surgical proceedings, histopathological examination of the pieces removed and the patient's postoperative evolution were analysed.

**Findings:** There were performed 1522 laparoscopic cholecystectomies for acute cholecystitis, out of which 108 (7,1% of all) were converted to open surgery. Analysing the experience of the surgical team, we can say that the converted laparoscopic cholecystectomies are found mainly in teams formed by senior surgeons assisted by junior surgeons – 43% (46/108), in comparison with teams formed by residents assisted by senior surgeons – 22% (25/108). The nondissectable fibrotic shirt front, woody inflammation of the pedicle, adhesions after past surgery and suspicion of a fistula are the most frequent causes of conversion – 45,35% (49/108). The distribution according to the gender was analysed in patients which underwent conversion, showing a significant difference: 5,39% (60/1112) in women and 11,7% (48/410) in men. The percentage of conversion was significantly higher for operations performed at more than 96 hours away from the beginning of the symptoms – 15,1% (29/192). The highest number of conversions occurred for gangrenous acute cholecystitis – 72% (77/108). 82,40% of all the acute cholecystitis which were converted were complicated with shirt front (89/108).

**Conclusions:** Conversion performed for laparoscopic cholecystectomies is a proof of ripening and professional responsibility, a fit solution for cases in which the advantages of laparoscopic surgery are overwhelmed by the risks found during surgery; gangrenous acute cholecystitis is one of the most important causes of conversion – 72%; the shirt front around the gallbladder was converted in 82,4% of cases; conversion is more frequent in men – 11,7%; acute cholecystitis with symptoms found for more than 96 hours are converted in 15,1% of cases.

**Key words:** acute cholecystitis, laparoscopic cholecystectomy, conversion

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