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Risk factors for intraabdominal abscess after laparoscopic appendectomy – results from large multicentre cohort study

According to meta-analyses laparoscopic appendectomy is associated with many benefits. However, in comparison to open surgery an increased rate of intraabdominal abscesses (IAA) has been reported. Identification of predictive factors for this complication may help to identify patients with higher risk of IAA.

Our aim was to identify potential risk factors for intraabdominal abscess after laparoscopic appendectomy (LA).

18 surgical units in Poland and Germany submitted data of patients undergoing LA to the online web-based database created by Polish Videosurgery Society of the Association of Polish Surgeons. It comprised 31 elements related to pre-, intra- and postoperative period. Surgical outcomes were compared among the groups according to occurrence of IAA. Univariate and multivariate logistic regression models were used to identify potential risk factors of complications.

4618 patients were included in the analysis. IAA was found in 51 cases (1.10%). In univariate logistic regression analysis following parameters were associated with occurrence of IAA: male sex (OR 2.02, 95% CI: 1.11-3.66), age >35 years (OR 1.93, 95% CI: 1.10-3.37), diabetes (OR 3.46, 95% CI: 1.35-8.87), time from onset of symptoms to LA >48h (OR 2.47, 95% CI: 1.40-4.34), Alvarado scale (OR 1.15, 95% CI: 1.01-1.31 with every point higher), CRP >50 mg/l (OR 3.96, 95% CI: 2.09-7.49), complicated appendicitis i.e. perforated/gangrenous or with periappendiceal abscess (OR 6.49, 95% CI: 3.54-11.90), intraoperative adverse events (OR 4.89, 95% CI: 1.90-12.58).

In multivariate model only complicated appendicitis (OR 3.70, 95% CI: 1.68-8.15) was statistically significant.

Further analysis revealed that occurrence of IAA had significant impact on postoperative reintervention (OR 126.95, 95% CI: 67.98-237.06), prolonged length of stay > 8 days (OR 41.32, 95% CI: 22.86-74.72) and readmissions (OR 33.89, 95% CI: 18.60-34.73).

This analysis shows that IAA occurs relatively rarely after LA. It is strongly associated with complicated appendicitis. Occurrence of this complication has great influence on postoperative period and due to the nature of its treatment is associated with the need of reintervention, prolonged length of stay and by extension possible readmission.

Kategoria: K1. Laparoscopia w nagłych stanach chirurgicznych / Laparoscopy in emergency surgical conditions

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