

## Effective of laparoscopy for post-operative small bowel adhesion in children

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**SUMMARY: Effective of laparoscopy for post-operative small bowel adhesion in children.**

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*Aim. The aim of this paper is to report a case of a child with adhesive small bowel obstruction treated by laparoscopic approach.*

*Case report. A 13-year old patient developed a small bowel obstruction*

*caused by adhesion. He was successfully treated by laparoscopic adhesiolysis and was discharged from the hospital on the 7th post-operative day in satisfactory condition. Discussion: this disease is treated by laparoscopy very rarely, especially in children. In patients without comorbidities, such as pulmonary or cardiovascular diseases, laparoscopic approach could be considered as the first approach in children because the patient has the advantage of less pain and short hospitalization.*

*Conclusion. Until clinical trials will address guidelines, when possible, laparoscopic approach should be attempted.*

KEY WORDS: Laparoscopy - Adhesion - Obstruction - Children.

### Introduction

One of most considerable cause of long-term morbidity in children after abdominal surgery is adhesive small bowel obstruction which can happen years later or very sudden in post-operatively period. Laparoscopy permit a reduction of morbidity rate and length of hospitalization (1). The aim of this paper is to report a case of a child with adhesive small bowel obstruction treated by laparoscopic approach.

### Case report

A 13-year-old male patient presented to our hospital with mesogastric pain irradiated to lower abdominal quadrants started a few hours ago, associated with nausea and vomiting and bowel was reported

closed to feces and gases. Past medical history revealed a previous surgical laparoscopic procedure for acute appendicitis one month ago. At the clinical examination the abdomen was tender, increased peristaltic bowel movements, no fever, heart rate was 75 bpm and O<sub>2</sub> saturation was 98%. The laboratory findings showed an increase of white blood cells (WBC) count (15,00 K/aE/L), especially neutrophils (82,40 %), normal C-reactive protein (CPR) level (< 10 mg/ dL). Abdominal X-ray revealed the presence of small bowel air-fluid levels and no free sub-diaphragmatic gas was detected (Figure 1). The abdominal computed tomography (CT) study confirmed the presence of small bowel air-fluid levels and detected the increase of bowel wall thickening and an abnormal expansion of the last small bowel loops up to 2,5 cm. with reduced bowel wall enhancement. A pelvic effusion was also found. The patient was diagnosed with small bowel obstruction and laparoscopic surgical procedure was proposed for treatment. The procedure was performed via 3 three ports. The last 30 cm. of small bowel loops appeared ischemic (Figure 2) and an adhesive band was identified and divided (Figure 3). The ischemic

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Figure 1 - Abdominal X-ray.

loops were irrigated with hot water and after 10 min. peristalsis started again and the bowel reacquired its physiological color, therefore no small bowel resection was required. The operative time was 1 hour and 20 minutes. The patient was discharged from the hospital on the 7th post-operative day in satisfactory conditions.

## Discussion

Scientific literature reports number of studies about the management and the treatment of adhesive small bowel obstruction in adult patients, in opposite just a little number of studies analyze the same problem related to children. The time gave laparoscopy the possibility to approach the majority of surgical procedure but this disease is treated by laparoscopy very rarely, especially in children (2). In patients without comorbidities, such as pulmonary or cardiovascular diseases, laparoscopic approach could be considered as the first approach in children (3, 4). Open conversion is still possible, but in case of possibility to finalize the procedure laparoscopically, the patient has the advantage of less pain and short hospitalization (5). In our case the patient have been diagnosed after 7 days due to a psychological weakness conditions of the relatives.



Figure 2 - Ischemic small bowel loops.

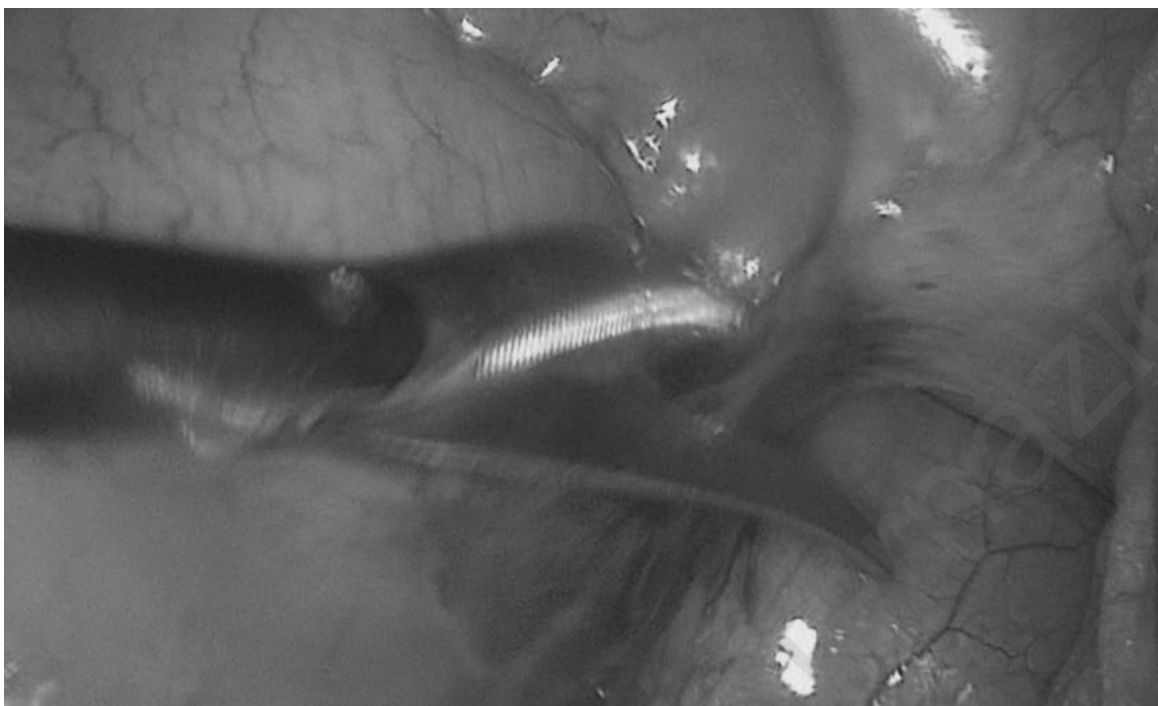


Figure 3 - An adhesive band was divided.

## Conclusion

The lack of randomized clinical trials highlight the

requirement of new scientific studies in order to identify the children patients who benefit from laparoscopic treatment but when possible the laparoscopy should be attempted.

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