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NEW TECHNOLOGIES IN LAPAROSCOPIC TREATMENT OF ACQUIRED LIVER CYSTS

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Background

The question of choosing the optimal method of surgical treatment of residual cavities after echinococcectomy remains open and is undoubtedly relevant.

Due to the impossibility of palpation during laparoscopic surgeries in the presence of inflammatory and infiltrative changes, abnormal anatomy of vessels and ducts, the use of laparoscopic ultrasound helps to avoid iatrogenic complications and exploratory laparotomies.

Aim

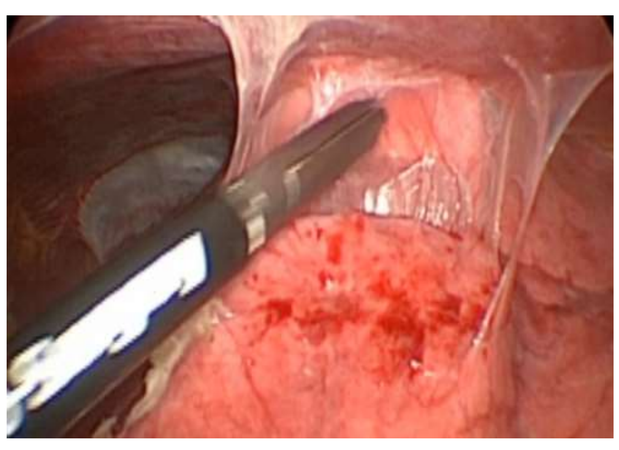
To improve the results of laparoscopic treatment of acquired liver cysts by using intraoperative ultrasound navigation

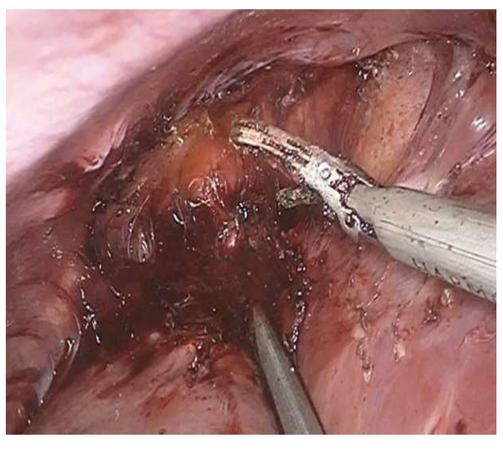
Methods

A retrospective study included three patients who underwent surgery after removal of large hydatid cysts (952.6 ± 47.5 mL) from the liver. The cysts were located in the liver SVI - SVIII. All patients underwent multiport laparoscopic echinococcectomy. Six to eight months later, the children were admitted with residual non-parasitic cysts (335.2 ± 21.3ml).Clinical case. Seven months ago, multiport laparoscopic echinococcectomy SVI-SVIII was performed for a large parasitic cyst (980 ml) in fifteen fifteen-year-old girl. According to ultrasound and CT data, there is a residual cavity in the right lobe of the liver SVIII (dimensions 100x72x97mm, volume 350ml). Studies on the recurrence of liver echinococcus are negative.

Surgical procedure: Laparoscopic access to the abdominal cavity was performed. During the revision of the abdominal organs, adhesions were noted on the visceral surface of the liver in the area of previous surgical intervention.

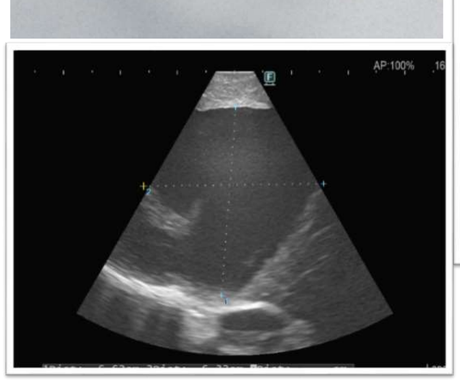
An intraoperative ultrasound examination of the liver was performed, and a 6.0x10.0 cm cystic lesion was detected in the right lobe of the liver. Adhesions were separated using an ultrasonic scalpel.





Using an ultrasound sensor, Arietta 750SE (Fujifilm, Japan), the most suitable location for cyst opening was selected. Using an ultrasonic scalpel, the cyst was opened, and about 380 ml of yellow-green liquid was obtained.

The fibro-altered cyst capsule was excised, and the walls of the residual cavity were treated. A safety drainage was installed.



Results

Thanks to the use of laparoscopic ultrasound with a miniature Arietta 750SE sensor, the exact localization of the residual liver cyst was determined during a multi-port laparoscopic cystectomy, and the surgical method for its removal was chosen, which helped to reduce the operating time and ensure patient safety.

The advantage of laparoscopic ultrasound was that the sensor was in direct contact with the liver, which not only provided high resolution but also allowed for a thorough examination of the bile ducts and vessels adjacent to the cyst, rather than just segmentally.

Conclusion

The choice of treatment method for acquired liver cysts, especially in difficult-to-reach locations (SVII-SVIII), is a multiport laparoscopic cystectomy using intraoperative ultrasound navigation with a miniature linear sensor.

The use of the proposed intraoperative complementation results in a significant reduction in the time of surgical intervention and the number of intra- and postoperative complications.

References

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