

## **The Role of Preoperative B-Mode and Doppler Ultrasonography in Predicting Technical Challenges for Laparoscopic Cholecystectomy**

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### **Abstract**

*Purpose:* The aim of this study was to predict probable technical challenges before laparoscopic cholecystectomy and to operate the proper patient at the right time and by the right technique.

*Methods:* The study was performed in a tertiary reference hospital in six months. B-mod grey scale, colour, and power Doppler ultrasonographies were obtained for fifty consecutive patients for whom elective laparoscopic holecystectomies were planned. The technical difficulties were noted by a single surgeon observer while the teams were performing the operations. Neither the observer nor the members of the surgical team were aware of the preoperative test results. These two groups of parameters were compared.

*Results:* There were significant correlations between the technical challenges encountered during the operations and preoperative ultrasonographic measurements: the mean of gallbladder wall thickness, increasing power Doppler signal of the gallbladder wall, stone size and the gallbladder's stone loading pattern.

*Conclusion:* B-mod grey scale and Doppler ultrasonography are the best tests at hand for predicting intraoperative challenges before laparoscopic surgery. It is important that the radiologist and surgeon reach consensus.

**Key words:** laparoscopic cholecystectomy, technical challenge, ultrasonography

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