

**Optimal MR cholangiography
in evaluation of hilar branching anatomy of living adult liver donors**

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목적: The purpose of our study was to assess the optimal cholangiography with the aim of developing a tailored approach for preoperative liver donor evaluation.

대상 및 방법: 33 consecutive healthy candidates underwent right lobectomy for right-lobe liver transplantation. All candidates underwent three kinds of MRC (T2 weighted single section single shot RARE sequence (conventional T2-MRC), volumetric T2-MRC, and Gd-BOPTA-MRC). Three radiologists recorded the visualization score of biliary ducts and the degree of artifacts in each modality. After 1 month, they independently reviewed the conventional T2-MRC and the three kinds of combined sets (combined set of conventional T2-MRC and volumetric T2-MRC, combined set of conventional T2-MRC and Gd-BOPTA-MRC, combined set of all three examinations). They recorded the predicted number of ductal orifices during right lobe harvesting and the diagnostic confidences on each imaging set. The MRI definitions of the predicted number of ductal orifices during right lobe harvesting were compared with the surgical findings.

결과: Mean visualization scores of overall ducts both for conventional T2-MRC and volumetric T2-MRC demonstrated significantly higher results in comparison with Gd-BOPTA-MRC. Mean visualization score of volumetric T2-MRC was significantly higher with that of conventional T2-MRC. Gd-BOPTA-MRC showed significantly lesser degree of artifacts in comparison with other MRCs. No significant difference of mean accuracies of predicting the number of orifice was observed within the comparison of the combined sets. In comparison between three combined sets and conventional T2-MRC, all combined sets showed significant higher accuracy than conventional T2-MRC. No significant difference of mean confidences was observed within the comparison of combined sets. In comparison between the combined sets and conventional T2-MRC, all combined sets showed significant higher confidence than conventional T2-MRC.

결론: Volumetric T2-MRC demonstrated significantly the highest mean visualization score for overall ducts. However, Gd-BOPTA-MRC showed significantly the lowest degree of artifacts. However, the combined sets of all three examinations may be an excessive and the combined sets of two modalities (conventional T2-MRC and volumetric T2-MRC / conventional T2-MRC and Gd-BOPTA-MRC) may be optimal choices for preoperative evaluation of hilar branching anatomy of living adult liver donors.