Absorption of Irrigation Fluid During Thulium Laser Vaporization of the Prostate

Gautier Muellhaupt, Dominik Abt, Livio Mordasini, Olivia Koehle, Daniel Stephan Engeler, Andreas Lüthi, Rafael Sauter, Hans-Peter Schmid & Christoph Schwab

PURPOSE
To assess the prevalence and extent of irrigation fluid absorption during thulium laser vaporization of the prostate.

MATERIAL AND METHODS
Fifty-four patients undergoing thulium laser vaporization of the prostate were prospectively included into the trial at a tertiary referral center. Isotonic saline containing 1% ethanol was used for intraoperative irrigation. Absorption of irrigation fluid was measured periodically during the operation using the expired breath ethanol technique. Among others, intra- and postoperative changes in biochemical and hematological laboratory findings were assessed.

RESULTS
Absorption of irrigation fluid was detected in 7 out of 54 (13%) patients with a median absorption volume of 265 mL (227-615). No significant differences of intra- and postoperative blood parameters were observed between absorbers and nonabsorbers. No risk factor (i.e., age, prostate size, surgery duration, applied energy, and amount of irrigation fluid) for the occurrence of fluid absorption could be identified.

CONCLUSION
Absorption of irrigation fluid also occurs during thulium laser vaporization of the prostate and should be kept in mind, especially in patients at a high cardiovascular risk. However, compared with previously assessed resection and vaporization techniques, thulium vaporization might have a favorable safety profile regarding fluid absorption.

type  journal paper/review (English)
date of publishing  1-3-2017
journal title  J Endourol (31/4)
ISSN electronic  1557-900X
pages  380-383