ASO AUTHOR REFLECTIONS

ASO Author Reflections: Revival of the In-Situ Hypothermic Perfusion? The Role of Complex Liver Surgery in the Modern Era

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PAST

Time has passed since Fortner described his technique “In-situ hypothermic perfusion.” At that time, tumors infiltrating the hepatic venous confluence were irresectable.¹ His technique evolved to the ex situ procedure, described by Pichlmayer, and the Ante-Situm procedure, described by Hannoun.^{2,3} Due to their complexity, these techniques are only applied in few centers. Additionally, the development of interventional therapies has questioned the role of these complex surgeries. Are these techniques still necessary in modern liver surgery?

PRESENT

Although the in situ hypothermic perfusion is an old technique, perioperative management evolved and made complex liver surgery safer. Therefore, if the current technology and management are combined, complex liver surgery can be safely applied.

FUTURE

In the era of highly potent chemotherapies (especially in colorectal liver metastases) and interventional therapies, complex liver surgery, such as in situ hypothermic

perfusion, needs to be applied with caution.⁴ However, in some patients resection might be the last choice. Therefore, in the future, hepatobiliary surgeons should be able to discuss all available options with the patient.⁵

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