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COMMENTARY

Chemoembolization of HCC: Time for Technical Standardization, or Is It Too Late?

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Dear Authors,

We read your article entitled "Current Trends in the Treatment of Hepatocellular Carcinoma with Transarterial Embolization: Variability in Technical aspects" with great interest.

In this article, the authors used a survey to investigate current worldwide trends in the management of hepatocellular carcinoma using an intra-arterial approach. This exceptional study highlights the vast heterogeneity of practices, which can be expected given the high number of usable devices, drugs, techniques, and the ways in which they can be combined. However, TACE has been practised since the early 1980 s, with numerous seminal studies confirming the technical issues in performing chemoembolization.

The first question that comes to mind is "Can such technical disparities change patient outcomes?".

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Many researchers have spent considerable time studying the best way to perform cTACE [2, 3]. However, a major flaw of such studies is that they have been largely experimental or based on patient cohorts without a relevant competitor. Should we collectively study such a technical point in such a randomized manner? To date, only a few researchers have tried to convert these results into evidence-based medicine. He et al. [8] recently published a study in which they compared the oncological outcomes of patients when cTACE was administered in a stable or unstable emulsion. Despite there being no difference in terms of tumour response or overall survival, the authors demonstrated a clear trend towards lower toxicity when a stable emulsion was used.

The second question is "Shall we study the drugs?". Obviously, yes. Idarubicin has been shown to be the most efficient drug for HCC cells, and the results of the IDASPHERE phase II study using idarubicin in place of doxorubicin showed an excellent safety profile with encouraging progression times and overall survival results (9.5 months and 18.6 months, respectively) for unresectable hepatocellular carcinoma [7].

The third question is "How does this evidence change our practice?". On the one hand, we have level 1 evidence that gives cTACE a strong position in a patient treatment algorithm [4]. On the other hand, we have a randomized study that failed to demonstrate any superiority of one chemoembolization technique over another (eg. DEBTACE vs. cTACE) [6, 9]. Should we compare cTACE and DEBTACE once again, or should we compare any drug-eluting platform in a new randomized study?

The fourth question is "How do we cope with heterogeneity when immunotherapies need to be combined with chemoembolization?". Such non-standardized practice will

massively confuse the debate! Which embolic material will better be able to trigger the anticancer immune system, and in what manner? The is probably the most important point and raises the question as to whether we can reasonably combine treatments that are not standardized with technical variations that have never demonstrated any efficacy.

In summary, this study shows a huge lack of homogeneity in TACE practice. To work on standardization, all IRs should read this publication and read the published guidelines again [1, 5]. Moreover, readers have to share their thoughts with their colleagues through formal critical literature reviews at department staff conferences in order to develop treatment protocols. It is probably not too late to standardize practices.

At last, to the authors, your work will challenge the conscience of IR during the next year; please let us know in one year through the repetition of your survey whether standardization is improving! Such a demonstration would truly make your work valuable and contribute to improving the daily clinical practice of interventional radiology.

Compliance with Ethical Standards

Conflict of interest None of the authors have any conflict of interest or financial disclosures to declare.

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