Real life treatment of hepatocellular carcinoma: impact of deviation from guidelines recommended therapy

Primary liver cancer is one of the most common cancers at the global level. The outcome of hepatocellular carcinoma (HCC) is related to the extent of both tumor and liver disease, which influence the applicability and efficacy of treatments. The Barcelona Clinic Liver Cancer (BCLC) staging system links disease stage with treatment modalities with an estimation of life expectancy. Most international treatment guidelines recommend therapy based on patient's BCLC stage: for patients at stage 0, radical therapies can completely eradicate the tumor; stage A patients should be evaluated for surgical resection or local ablations; transarterial chemoembolization (TACE) is the preferred option for stage B patients; sorafenib is the sole approved treatment that has shown a positive impact on survival for patients with vascular invasion, extrahepatic spread and/or constitutional symptoms in stage C; and stage D patients should receive only symptomatic care, as their expected survival is less than three months. Non-adherence to international guidelines is common, even in resource-rich settings. How often real-life management deviates from recommended therapy in a resource-limited setting and the impact of deviation on patients´ survival has not been evaluated and is the subject of this study.

In this study, the treatment modalities of 770 patients (87% males, mean age 57.8 years) were analyzed and the effect of treatment deviation from guidelines recommended therapy on outcome over 36 months was examinedin a public tertiary referral hospital for liver disease in Egypt. The reason for the deviation was noted. Deviations from the recommended therapy for the BCLC stage was categorized as "upward stage migration"; a group that received treatment which according to the international recommendations was indicated for the previous BCLC stage, or "downward stage migration"; those who received treatment which according to international recommendations was indicated for the later BCLC stage. The patients were followed and the survival was compared in both groups.

Only 48.4% of the patients received the recommended treatment, 4.5% of patients received upward treatment stage migration and 47.1% received downward treatment stage migration. Deviation from therapy occurred in 34.2% and 37.7% in stages 0-A and B. The major discrepancy occurred in patients with BCLC stage C (92.4%).

The main reason for deviation were the low accessibility to TACE and transplantation, the long waiting time for sorafenib therapy and its expected low survival benefit beside its adverse effects. Survival of stage 0-A patients who received downwards stage migration was lower than those who received recommended treatment. Upward stage migration in stages B, C and D did not improve survival compared to those who received recommended treatment.

This study shows that limited resources were the cause for deviation from guideline recommendation in most cases.This impacted patient survival, and should alert policy-makers and

healthcare planners to allocate more resources to these groups of patients, and to strive to make recommended therapy affordable to patients in need.

Our results are probably representative of other resource-limited settings, where treatments are available but not within patients' affordability. These results, however, cannot be generalized to resource-rich countries where treatments are available and completely reimbursed for all patients.

Publication

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