

HCC Recurrence Post DAA and its Relation to Treatment Time of Chronic HCV infection

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INTRODUCTION

Hepatocellular carcinoma (HCC) is the fifth most common cancer type and second most common cause of cancer-related death worldwide (1). In recent years, Direct acting antivirals (DAAs) often produce sustained virologic response (SVR) rates greater than 90% for most HCV genotypes, with improved tolerability. (2).

Egypt has the highest prevalence of HCV worldwide. More than 3 million Egyptian HCV infected patients is expected to be treated till the end of 2019 (3) There is controversy regarding the associated risk of patients developing either de novo or recurrent HCC after DAA treatment. HCC post DAAs seems to be different from that in patients not received DAAs in certain aspects as noted in recent studies (4)

AIM

In this study, we aim to evaluate the early recurrence of HCC in cirrhotic patients treated with DAA and effect of time of treatment of virus C post HCC ablation on the recurrence rate of HCC.

METHOD

The study includes 400 HCC patients with HCV infection who achieved complete response to ablative HCC treatment according to EASL and AASLD guidelines for management of HCC. Patients attended National Liver Institute (NLI) HCC clinic and multidisciplinary HCC committee from august 2017 to august 2018 with HCC recurrence. 200 patients of HCC recurrence and DAA treated divided into 4 groups according to time of DAA treatment post curative treatment of HCC. Group 1, 2, 3, 4 each is 50 patients and started DAA treatment 3, 6, 9 and 12 months after curative HCC treatment and group (5) consists of 200 HCC recurrent patients not exposed to antiviral treatment. All patients achieved complete response to ablative treatment of HCC. All patients were subjected to complete history taking, clinical examination, Laboratory measurements AST, ALT, total and direct bilirubin, alkaline phosphatase, GGT and serum albumin and INR, CBC and AFP, abdominal ultrasound and triphasic CT scanning of the abdomen one month after ablative therapy for HCC with complete response in all groups and every 3 months as a routine follow up after treatment.

RESULTS

HCC recurrence in the first 6 months after complete response to HCC ablation was significantly lower in patients not treated with DAA (13.5%) than after 6 months post SVR after DAA in patients received successful ablative therapy before DAA treatment (75%) (P<0.001). In the second 6 months HCC recurrence is significantly higher in HCC patients not exposed to DAA than those treated with DAA (86.5 %) patients and (25%) patients respectively

(P<0.001). There was a significant acceleration of the rate of recurrence from group 1 to group 4 in the first 6 months followed by a significant decline in the rate of recurrence in the second 6 months from group 1 to group 4. Portal vein invasion and lymph node metastasis is present in a significant higher rates in HCC patients treated with DAA than those not exposed to DAA (p<0.05). AFP showed higher levels in patients post DAA than those did not receive DAA but was not statistically significant. No significant differences between groups regarding age, sex, type of ablative treatment type of DAA treatment as regard time to recurrence nor tumor aggressiveness (p>0.05).

Table 1 Recurrence among different groups.

Recurrence	Control (n=200)	DAA treated group (n=200)	P value
First 6months	27(13.5%)	144(72%)	<0.001*
Second 6 months	173(86.5%)	56(28%)	<0.001*

Table 2 Recurrence among DAA treated groups.

Recurrence	Group (1) (n=50)	Group (2) (n=50)	Group (3) (n=50)	Group (4) (n=50)	P value
First 6months	32(64%)	29(58%)	35(70%)	48(96%)	0.001
Second 6 months	18(36%)	21(42%)	15(30%)	2(4%)	0.001

Table 3 Tumour characteristics of the studied groups.

	Not treated with DAA (n=200)	DAA treated group (n=200)	P value
AFP Mean±SD	45.00 (2.00-109000)	53.40 (0.92-147000)	0.268
Portal vein invasion	10(5)	32(16)	0.0001
Lymph node metastasis	8(4)	20(10)	0.0001

CONCLUSIONS

HCC recurrence post DAA seems to be accelerated and more aggressive than HCC recurrence in patients not exposed to DAA. We recommend to postpone treatment with DAA to more than one year post complete response to ablative treatment of HCC.

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