Treatment outcome of the patients with small hepatoma
(≤5 cm in diameter) in relation to treatment modalities and underlying liver function

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Background/Aims: To compare treatment outcome of hepatocellular carcinoma(HCC) under the size of 5 cm in relation to underlying liver function and treatment modalities, analysis of data from 145 patients was performed. Methods: In this study, the records of 145 patients with small HCC (≤5 cm in diameter determined by hepatic angiography) were reviewed. Clinical parameters were analyzed and survival rate, recurrence rate were calculated. Results: There were 107(73.8%) men and 38 women. Mean age at diagnosis was 55.1(range : 25－83 year-old). HBsAg was detected in 97(66.9%) patients. Seventy two(50.0%) patients showed markedly elevated(>400 ng/mL) serum alpha-fetoprotein(AFP) level. Liver cirrhosis was associated in 109(75.2%) patients. Sixty five(44.8%) patients underwent surgery, 63(43.5%) underwent transarterial therapy(TAT), 8(5.5%) underwent other modalities of therapy and the remaining 9(6.2%) patients did not receive any specific treatment for HCC. In relation to the underlying liver function, 119(82.1%) patients belonged to the non-cirrhotic or Child-Pugh class A, 20(13.8%) to class B and 6(4.1%) to class C. The median follow-up duration was 21 months. When analyzed with respect to treatment modalities alone, median survival was 43 months for all patients, 60 months for surgery, 29 months for TAT, 20 months for other treatment and 18 months for patients who received no specific treatment. Without considering liver function, cumulative 3－year survival rate was 68.6% for surgery, 43.9% for TAT, 29.2% for other treatment
and 0% for no treatment. The survival rate for the patients who underwent surgery was significantly higher than for any other treatment modalities without considering the underlying liver function or in the non-cirrhotic/Child-Pugh class A (p<0.001). In patients whose tumor size was equal to or less than 3 cm, there was no difference in survival rate in relation to the treatment modalities when not considering the underlying liver function of each patient (p>0.05). But in patients classified as the non-cirrhotic/Child-Pugh class A, better survival was observed in the surgery group than the TAT group (p<0.05). The only factor influencing survival was the pre-treatment serum AFP level (p<0.05). The overall recurrence rate was 30.3%. For the entire patients, the factor significantly influencing the recurrence rate was the presence of underlying cirrhosis. When considering only the patients in the surgery group, the different types of surgical procedures significantly influenced the recurrence rate. **Conclusion:** Surgery is the treatment of choice for patients with HCC equal to or smaller than 5 cm. But for those patients whose tumor size is less than 3 cm, TAT may be a reasonable alternative to surgery when the liver function is not adequate for hepatic resection.

Because overall recurrence rate exceeded 30% and median time of recurrence was only 9.5 months after definitive treatment, careful follow-up is required for all patients who undergo treatment for small HCC.

**Key words:** hepatocellular carcinoma, surgery, transarterial therapy, survival, recurrence

서 론

초음파 및 혈청 알파 테아단백(Alfa-fetoprotein: 이하 ‘AFP’)을 이용하여 간세포암(이하 ‘간암’)을 조기에 진단하기 위한 노력이 진행되면서, 5 cm 이하 크기의 간암이 진단되는 비율이 점차 증가하고 있다. 이아리 이와 같은 작은 크기의 간암에서 여러 치료방법들의 치료성과를 상호비교하는 연구들이 발표되고 있다.4-6. 현재 소간암의 정의는 진단방법의 발달에 따라 진단서 중앙의 장경 5 cm에서 3 cm로, 최근에는 2 cm로 점차 하향되는 추세이다.7-9. 일반적으로 간암은 장경이 1 cm 증가할 때마다 5년 생존율이 대략 10% 정도 감소한다고 알려져 있으며, 장경이 커크수록 원발중피로부터의 간내전이도 증가한다.10. 소간암은 수술을 시행했을 때 결과율이 높고 수술 후 사망률이 낮으며 후기 생존율도 우수하다고 알려져 있다.10,11. 또한 간동맥 색전술이나 중앙내 에타놀 주입 만으로도 치료효과가 높으며, 특히 중앙의 크기가 3 cm 이하인 경우에는 내과적 치료만으로도 완치가 가능하다는 보고가 있다.12. 이러한 치료적 이점 때문에 조기에 효율적으로 소간암을 진단하려는 노력이 계속되고 있다. 국내에서도 1980년대 초반부터 소간암의 진단에 관한 보고가 나오기 시작한 이래13, 작은 크기의 간암을 진단하기 위한 노력이 경주되고 있으나14,15. 장경 5 cm 이하인 간암의 예후와 다양한 치료방법에 따른 치료성과를 비교한 연구는 드문 실정이다. 이에 저자 등은 간동맥 조영술을 시행하여 진단 당시 중앙의 크기가 5 cm 이하로 판정된 간암 환자들을 대상으로 이들을 간기능에 따라 계층화 하고 수술, 간동맥 치료 등 치료방법에 따라 분류하여 임상적 특성, 생존율 및 재발율 등을 후향적으로 분석함으로써, 장경 5 cm 이하인 간암에서 간기능에 따른 최선의 치료방법이 무엇인지를 모색해 보고자 하였다.