

Screening for liver cancer in high risk patients in Switzerland: Yes, it works, but No, we do not do it systematically!

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Ultrasound examinations are regularly performed in cirrhotic patients in order to evaluate complications such as the appearance of focal liver lesions, portal vein thrombosis and ascites development. The study published in this journal by R.S. Frey and colleagues reports on experience in their centre of ultrasound surveillance in the 2-year period 2011/2012 [1]. In the 285 patients screened, 696 ultrasound examinations were performed and detected nine new hepatocellular carcinomas (HCCs) after appropriate work-up. The results indicate that regular screening in 6-month intervals by ultrasound is feasible, and permits early detection and treatment of HCC at a reasonable cost in Switzerland. This is in line with current European, USA and Asia-Pacific guidelines as well as health technology assessment reports, in spite of the fact that universally convincing data demonstrating that screening reduces mortality are currently lacking.

In the past diagnosis of HCC meant certain and imminent death, but the advent of new treatment options defined and tailored to individual patients by interdisciplinary tumour boards has improved prognosis significantly in our country. Data from Switzerland confirm this trend showing that the age-standardised relative survival proportions (RS) in patients diagnosed with HCC between 1990 and 1999 compared with those in men, diagnosed with HCC between 2000 and 2009 is improving. In the earlier decade RS for men was 11.8% at 3 years after diagnosis, and 11.6% in women. A decade later the RS had improved considerably to 19.9% in men and 19.4% in women [2]. This is due in part to the availability of effective systemic therapy with sorafenib (since 2006) in Child A patients with advanced HCC, but also, and progressively so, by the use of more and more sophisticated locoregional treatments including surgical resection, radiofrequency ablation, chemoembolisation, radioembolisation using yttrium-95 loaded particles and, last but not least, liver transplantation. The fact that carefully selected patients rarely relapse after transplantation explains why these patients have an excellent prognosis. This relatively new and expanding indication competes for organs that are in painfully short supply in Switzerland. If we could improve early detection rates we would be able

to obviate the need for transplantation in a significant proportion of patients.

What could be done to improve cirrhosis detection rates? Cirrhosis is notoriously difficult to diagnose and typically requires a liver biopsy. Subtle indicators can be splenomegaly, spider angiomas, white nails or laboratory abnormalities such as the presence of altered liver function tests and low platelet levels. The introduction of the Fibroscan® and other methods that assess liver stiffness and fibrosis non-invasively facilitate early diagnosis of fibrosis and cirrhosis at low cost and virtually no risk for the patient. They are used more often as they define which patients have access to reimbursement of antiviral treatment for hepatitis C in different countries including Switzerland.

Host factors, age, exposure to toxins and the underlying liver disease determine the risk for cirrhosis and the risk of developing HCC. Annual incidence rates of HCC have been reported to be 1.5% per year in patients with cirrhosis due to viral hepatitis B and C, genetic haemochromatosis and other forms of cirrhosis associated with metabolic and autoimmune diseases. Data derived from the French CirVir Prospective Cohort which included 1 654 patients with biopsy-proven cirrhosis due to hepatitis C or (and) B [3]. The patients were followed by 35 participating centres for a median of 34 months. The study showed high HCC incidence rates: focal liver lesions were observed in 18.7% within 3 years and 7.5% were diagnosed as HCC. Thanks to systematic screening according to guidelines, 79.3% of the patients were diagnosed at a curable stage (within Milan criteria) and 70.4% underwent curative treatment. This large prospective multicentre study confirms the results obtained by R.S. Frey and colleagues.

How is access to HCC screening in Switzerland? Primary care physicians are on the forefront to identify patients with liver disease, including cirrhosis, and to refer them to specialised centres which in turn will orchestrate appropriate screening. Guidelines for screening patients for chronic viral hepatitis have recently been updated for Switzerland and should help in the detection process [4].

Switzerland has no systematic national screening programme for HCC in cirrhotic patients. Whether screening

is done or not depends very much on the initiative of general practitioners, patient information and compliance, access to liver specialists, and local expertise and resources. Population-based data on screening rates are missing. Al Hasani and colleagues studied patients seen at a tertiary centre in Bern and showed that privately insured patients and those followed-up by liver specialists were more likely to be screened systematically [5].

What could we do to improve prevention and early detection? We need to improve the implementation of vaccination guidelines for hepatitis B. While the vaccination programmes implemented at the level of the Cantons in neonates and young adolescents are yielding satisfying results, coverage of adults at risk is probably still insufficient. Alcohol is a major cause of morbidity and mortality in Switzerland and the public health agenda dedicated to alcohol prevention is considerable but needs to be supported by all healthcare professionals. Sad to observe that alcoholic beverages are still sold more cheaply than mineral water. Effective treatments for chronic hepatitis B and C are available for the approximately 100 000 persons in Switzerland, only 50% of whom have been diagnosed. To this author, the need for a more aggressive Swiss national screening strategy for chronic viral hepatitis is obvious, or does Switzerland want to remain on the 11th rank as published

in an European survey on National Viral Hepatitis Programs in the EU region [6]?

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References

- 1 Frey RS, Boldanova T, Heim M. Ultrasound surveillance for hepatocellular carcinoma: real-life performance in a hepatology outpatient clinic. *Swiss Med Wkly.* 2015;145:w14200.
- 2 Dufour J-F, Bordonni A, Lorez M and the NICER Working Group. Trends in hepatic cancer survival in Switzerland. *Schweizer Krebsbulletin.* 2014;1:46–50.
- 3 Trinchet J-C, Bourcier V, Chaffaut C, Ahmed MA, Alam S, Marcellin P, et al. Complications and competing risks of death in compensated viral cirrhosis (ANRS CO12 CirVir Prospective Cohort) *Hepatology.* 2015;62:737–50.
- 4 Cebolla B, Björnberg. Health Consumer Powerhouse: Euro Hepatitis Index 2012 Report ISBN 978-91-980687-0-2.
- 5 Al Hasani F, Knoepfli M, Gemperli A, Kollar A, Banz V, Kettenbach J, et al. *Annals of Hepatol.* 2014;12(2):204–10.
- 6 Fretz R, Negro F, Bruggmann P, Lavanchy, De Gottardi A, Pache I, et al. Hepatitis B and C in Switzerland – healthcare provider initiated testing for chronic hepatitis B and C infection. *Swiss Med Wkly.* May 17;143:w13793. doi: 10.4414/smw.2013.13793.