

STRATEGIES TOWARD ELIMINATION OF HEPATITIS C VIRUS INFECTION AMONG CHILDREN IN A HYPERENDEMIC TOWNSHIP IN TAIWAN

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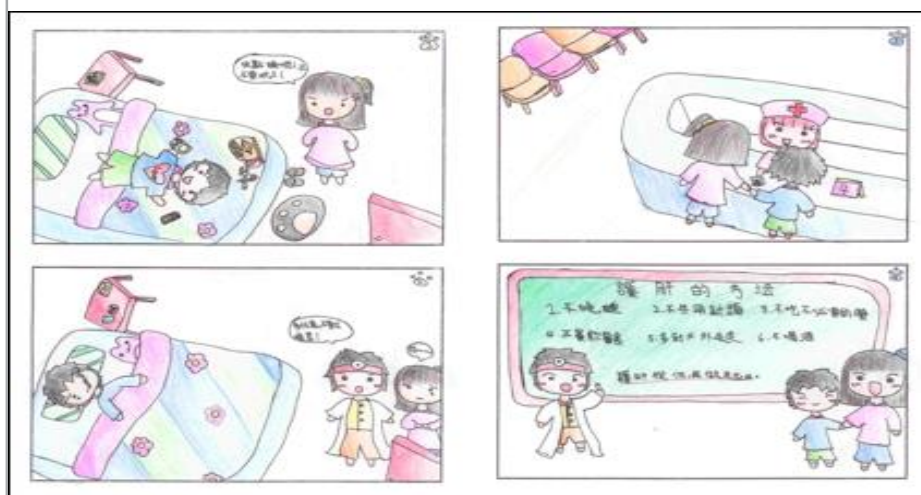
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BACKGROUND

The cornerstones of primary prevention efforts and reducing the burden of hepatitis C virus (HCV) infection are early diagnosis, effective preventing programmes, and appropriate treatment. The importance should be emphasized more in Southern Taiwan where carries a much more HCV epidemic. Tzukuan Township is a hyper-endemic area of HCV infection. The anti-HCV prevalence reached 41.6% high among adult residents with an annual incidence of 4.5% in 1995. About 90% of hepatocellular carcinoma (HCC) patients in this township were HCV-related. Moreover, young teenagers living in Tzukuan also had higher prevalence (1.4%) of HCV infection. We have vigorously implemented several public strategies in it since then. We aimed to assess the epidemiological trends among the young generation during the past two decades.

METHODS

Tzukuan Township, where comprises 15 villages in an area of 11,595 km², is located just north of Kaohsiung City in Southern Taiwan. The total population is about 36,500 in 2014. There are three aspects of intervention among the young generation during the past 2 decades in Tzukuan, including group educational programs, free mass liver disease screening, and "Let Kids Talk" interactive activities (Figure 1). The 5-years interval changing prevalence of anti-HCV seropositivity was analyzed from our database during our annual liver disease screening in Tzukuan among the teenagers.



RESULTS

From Jan 2000 through Dec 2016, a total of 1,296 teenagers, including 653 (50.4%) males, aged 15.2 ± 1.2 years, received anti-HCV examination during free liver disease screening. The general prevalence of anti-HCV decreased substantially from 1.5% (6/408) of year 2000-5 and 0.5% (1/211) of year 2006-10 to 0.6% (4/677) of year 2011-6 (P=0.25) (Table 1). All the anti-HCV+ subjects were negative for HCVRNA confirmation test. The efforts may contribute to the significantly decreasing prevalence among adults, from 21.5% (1,115/5,193) of year 2000-5 and 26.6% (278/1,044) of year 2006-10 to 17.6% (314/1,783) of year 2011-6 (P<0.001).

Figure 1. The strategies for intervention among teenagers



Table 1. The changing prevalence of anti-HCV seropositivity among teenagers in Tzukuan

	Total	2000-2005	2006-2010	2011-2016	P
Anti-HCV+ teenagers, n/N (%)	11/1,296 (0.9)	6/408 (1.5)	1/211 (0.5)	4/677 (0.6)	0.25
Anti-HCV+ adults, n/N (%)	1,707/8,020 (21.3)	1,115/5,193 (21.5)	278/1,044 (26.6)	314/1,783 (17.6)	<0.0001

CONCLUSIONS

Focused and novel strategies help to elimination of HCV infection in the hyper-endemic area among teenagers in Taiwan.

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CONFLICTS OF INTEREST

The authors declare there is no conflict of interest in the study.

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