

EVOLUTION OVER A 15 YEAR PERIOD OF THE EPIDEMIOLOGICAL PROFILE OF 2884 NEWLY DIAGNOSED HCV PATIENTS IN SOUTHERN BELGIUM.

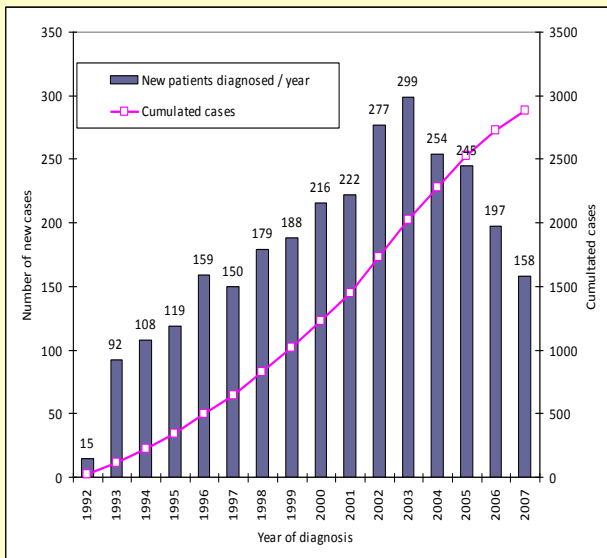
J.P. Loly¹, Chr. Gérard¹, D. Vaira¹, A. Lamproye¹, B. Bastens², B. Servais³, E. Wain⁴, Chr. Bataille⁵, J. Delwaide¹

(¹) Université de Liège – CHU, Liège, Belgium – (²) Centre Hospitalier Chrétien, Liège, Belgium - (³) Centre Hospitalier du Bois de l'Abbaye, Seraing, Belgium - (⁴) CHPLT La Tourelle, Verviers, Belgium - (⁵) Centre Hospitalier Huy, Belgium.

INTRODUCTION: Our aim is to observe the evolution of HCV epidemic in Belgium. The evolution over a 10 year period (1992-2003) of the epidemiological profile of 1726 newly diagnosed HCV patients in Belgium had been previously published (*J Med Virol* 2005, 76 : 503-510). We extended this analysis over 5 additional years (until 12/2007) on 2884 pts.

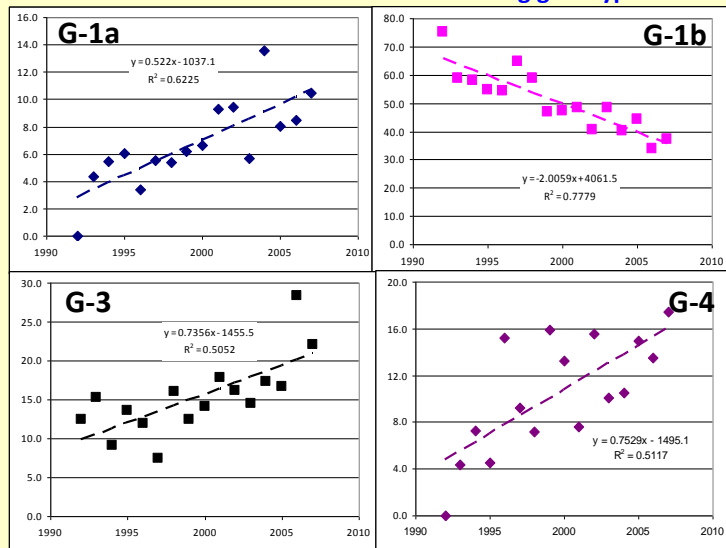
MATERIAL & METHODS : The data base contained 2884 pts found HCV-PCR positive between 1992 and 2007. For all patients, the following parameters were available : age, sex, date of birth, date of first HCV-PCR positive, place of residence, ethnic origin. The genotype has been identified for 1585 patients (55%), whereas a risk factor of HCV acquisition could be documented for 1389 patients (48%). The postal code of residence place of HCV patients in Liège and suburbs was documented for 1719 HCV patients (60%). The evolution with time of genotypes and risk factors was calculated using a linear regression model ($Y = aX + b$) where "a" is the slope representing the annual variation of the considered parameter (risk factors and genotypes). The annual rate of variation was expressed in %.

Number of newly HCV diagnosed pts [1992-2007]



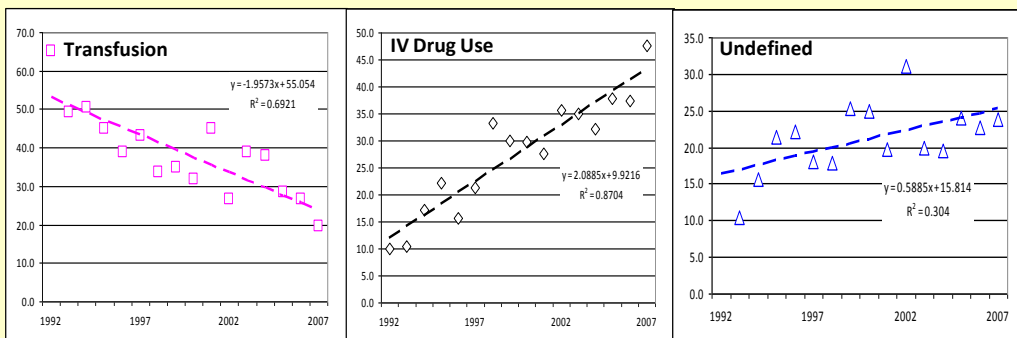
The number of new pts increased linearly with time until 2003 ($r=0.97$) with a maximum of 300 newly presenting pts/year, but after 2003, this number decreased rapidly (158 in 2008). Cumulated cases increased.

Evolution with time of HCV infecting genotypes



There was a significant evolution with time of infecting HCV genotypes. Significant linear decrease of 2% /yr in the frequency of genotype 1b, is counterbalanced by a significant increase of genotype 1a (0,52%/yr), 3 (0,74%/yr) and 4 (0,75%/yr). Between 1992 and 2007, the evolution of genotypes was as follows : genotype 1b [66% to 36%], genotype 1a [3% to 11%], genotype 3 [10% to 21%] and genotype 4 [5% to 16%].

Evolution with time of HCV Risk Factors



The rate of newly presenting pts infected by *Transfusion before 1990* decreased, but only by 1,9%/yr (reaching always the high figure of 20% of newly presenting pts in 2008). The proportion of *Intravenous Drug Users* increased by 2%/yr (40% in 2008). Pts presenting *Undefined* risk factors increased by 0,6%/yr (25% in 2008), probably in relation with migration in Belgium of pts originating from countries where HCV is highly prevalent.

Loco-regional variations

Parameters	HUY	LIEGE	VERVIERS	WAREMME	p
Age (<50)	51.01	41.56	44.74	50	NS
Sex (M)	44.3	54.39	52.83	53.13	NS
Transfusion	35.57	23.3	21.56	10.94	0.0004
IV DU	11.41	18.46	7.82	6.25	<0.0001
Dialysis	3.36	1.88	1.35	1.56	NS
Other	8.72	12.14	15.09	10.94	NS
Sexual	0.67	0.89	1.62	3.13	NS
IMP	3.36	3.36	12.94	1.56	<0.0001
Surgery	0	0.79	0.54	0	NS

The distribution of risk factors (transfusion, drug use, and, surprisingly, invasive medical procedures [IMP]) significantly differed between different geographical areas in Belgium.

CONCLUSION : ● The epidemic continues to evolve with the same trends observed during our previous study : whereas the rate of newly presenting patients infected by transfusion before 1990 is decreasing, it was still concerning 20% of patients in 2008. Genotype 1a, 3 and 4 increased with time contrarily to genotype 1b which significantly decreased.

- After reaching a top in 2003, the number of newly HCV diagnosed patient is now decreasing in Southern Belgium.
- Some loco-regional variations have been observed.

Such analyses are useful for evaluating the epidemiological changes of C virus infection and for anticipating the future economical costs of HCV treatment in the next few years.