

Chapter - 10

HEPATITIS ON DIALYSIS

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SECTION A: PREVALENCE

The current prevalence of Hepatitis B and Hepatitis C in HD and PD were low; 4% for both Hepatitis B and Hepatitis C in HD and 3% for Hepatitis B and 2% for Hepatitis C in PD.

In HD, the prevalence of Hepatitis B had remained stable at 4-5% for the past 10 years. The prevalence of Hepatitis C was much higher in the earlier years (17% in 2004) suggesting nosocomial transmission of Hepatitis C within the hemodialysis unit. This had however reduced gradually over the years and was now at 4-5%, which was comparable to that of Hepatitis B. This reflects that there was increased awareness regarding Hepatitis C seroconversion, and effective infection control measures were in place to minimize nosocomial transmission of Hepatitis C in the hemodialysis unit. In PD, the prevalence of Hepatitis B and Hepatitis C had remained low and stable throughout the years.

Table 10.1: Prevalence of positive HBsAg and positive Anti-HCV at annual survey, HD patients 2004-2013

Year	Number of patients	Prevalence of HBsAg+ (%)	Prevalence of Anti-HCV+ (%)
2004	7617	5	17
2005	8956	4	14
2006	11294	5	12
2007	12496	5	11
2008	14955	4	9
2009	17361	4	8
2010	18829	4	7
2011	21647	4	6
2012	24891	4	5
2013	27911	4	4

Table 10.2: Prevalence of positive HBsAg and positive Anti-HCV at annual survey, PD patients 2004-2013

Year	Number of patients	Prevalence of HBsAg+ (%)	Prevalence of Anti-HCV+ (%)
2004	1200	4	5
2005	1318	4	5
2006	1494	5	4
2007	1731	5	4
2008	2017	4	3
2009	2144	4	3
2010	2280	3	3
2011	2461	3	3
2012	2794	3	2
2013	3161	3	2

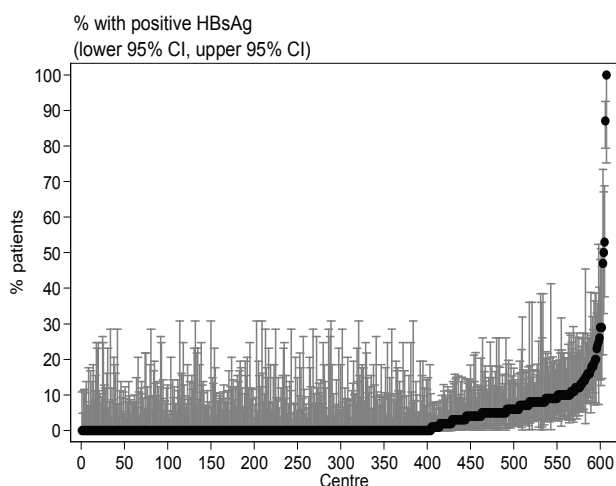
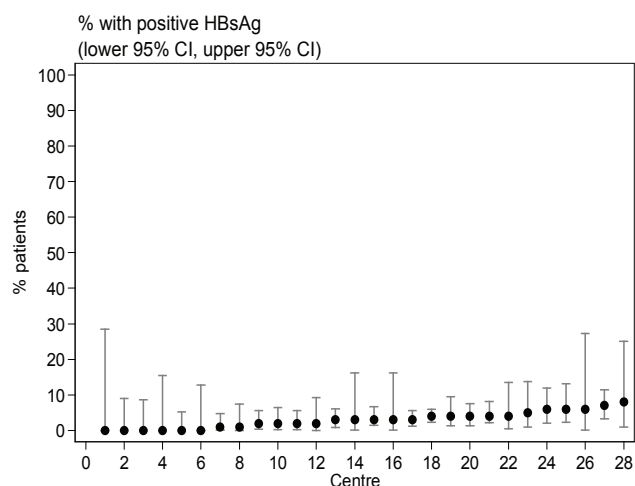
SECTION B: CENTER VARIATION

We continued to see a wide centre to centre variation in the prevalence of Hepatitis B and Hepatitis C among HD centres. More than 50% of the HD centres did not have Hepatitis B or C patients. These centres may practice the policy of not accepting Hepatitis B or Hepatitis C patients, resulting in the concentration of these patients into the larger and older centres. Differences in infection control measures among HD centres may also play a role.

The prevalence of Hepatitis B and Hepatitis C were fairly similar among the PD centres.

Table 10.3: Variation in Proportion of patients with positive HBsAg at annual survey among HD centres, 2004-2013

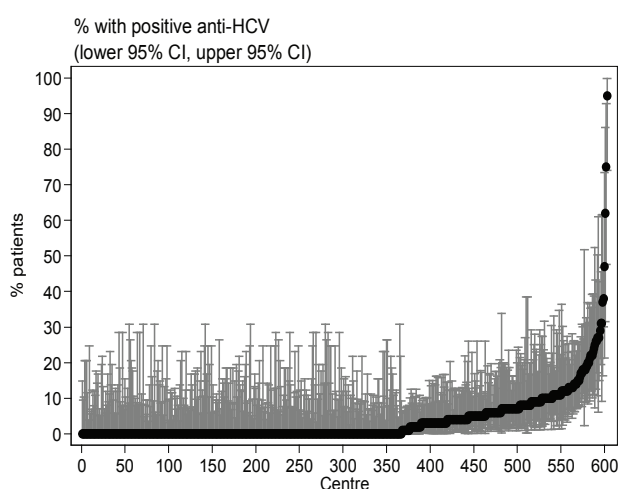
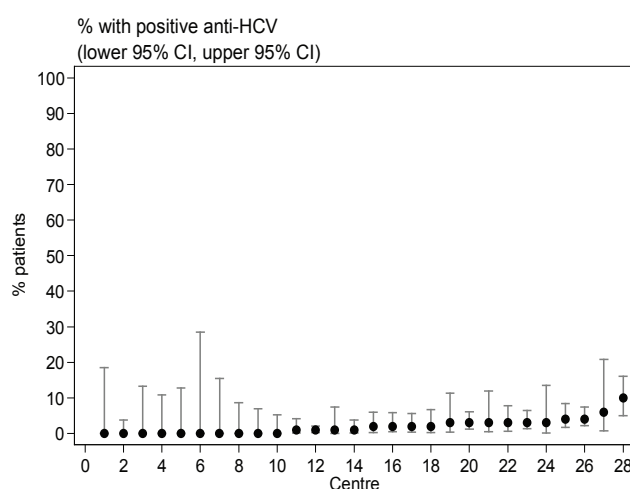
Year	Number of centres	Min	5 th Centile	LQ	Median	UQ	95 th Centile	Max
2004	211	0	0	0	3	8	15	56
2005	237	0	0	0	2	7	15	60
2006	288	0	0	0	1.5	7	16	80
2007	318	0	0	0	0	7	14	57
2008	367	0	0	0	0	6	12	80
2009	415	0	0	0	0	5	13	71
2010	451	0	0	0	0	5	12	93
2011	507	0	0	0	0	4	12	100
2012	563	0	0	0	0	4	12	100
2013	607	0	0	0	0	4	13	100

Figure 10.3: Variation in proportion of patients with positive HBsAg among HD centres, 2013**Figure 10.4:** Variation in proportion of patients with positive HBsAg among PD centres, 2013**Table 10.4:** Variation in proportion of patients with positive HBsAg at annual survey among PD centres, 2004-2013

Year	Number of centres	Min	5 th Centile	LQ	Median	UQ	95 th Centile	Max
2004	18	0	0	2	3.5	5	11	11
2005	19	0	0	2	3	5	10	10
2006	22	0	0	2	4.5	6	7	13
2007	22	0	0	2	4	6	8	11
2008	24	0	0	1.5	3	5	10	13
2009	25	0	0	1	3	5	10	10
2010	25	0	0	1	3	4	6	6
2011	27	0	0	0	2	4	6	23
2012	28	0	0	0	2	3.5	5	8
2013	28	0	0	1	3	4	7	8

Table 10.5: Variation in proportion of patients with positive anti-HCV at annual survey among HD centres, 2004-2013

Year	Number of centres	Min	5 th Centile	LQ	Median	UQ	95 th Centile	Max
2004	214	0	0	4	12	25	50	100
2005	238	0	0	2	10	21	39	100
2006	286	0	0	0	8	18	41	100
2007	317	0	0	0	7	15	36	100
2008	367	0	0	0	5	13	29	100
2009	416	0	0	0	3	10	27	100
2010	451	0	0	0	0	9	23	93
2011	507	0	0	0	0	7	20	95
2012	564	0	0	0	0	6	19	95
2013	603	0	0	0	0	5	17	95

Figure 10.5: Variation in proportion of patients with positive anti-HCV among HD centres, 2013**Figure 10.6:** Variation in proportion of patients with positive anti-HCV among PD centres, 2013**Table 10.6:** Variation in proportion of patients with positive anti-HCV at annual survey among PD centres, 2004-2013

Year	Number of centres	Min	5 th Centile	LQ	Median	UQ	95 th Centile	Max
2004	18	0	0	1	4.5	7	10	10
2005	19	0	0	2	4	8	11	11
2006	22	0	0	2	3	6	8	11
2007	22	0	0	1	2.5	6	8	9
2008	24	0	0	0	3.5	4	5	9
2009	25	0	0	0	2	3	7	20
2010	25	0	0	0	2	3	5	20
2011	26	0	0	0	1.5	3	12	15
2012	28	0	0	0	1	3	5	10
2013	28	0	0	0	1.5	3	6	10

Conclusion

The prevalence of Hepatitis B has been consistently low throughout the years and do not differ significantly between HD and PD indicating the effectiveness of vaccination, and segregation of Hepatitis B patients. The seroconversion risk for Hepatitis C is higher in HD compared with PD suggesting that nosocomial transmission within the hemodialysis unit plays an important role. Although the prevalence of Hepatitis C in HD has gradually reduced over the years and is currently comparable to that of Hepatitis B, we must continue to pay attention to strict infection control measures and have regular audits to ensure its prevalence remains low.