**Is a single hepatitis B vaccine dose sufficient as post-exposure prophylaxis as an interim measure in during the Covid-19 epidemic?**

If someone is un-immunised and immunocompetent the rate of HBV vaccine response is 30-50% after one dose, 50-70% after 2 doses and 90-95% after three doses. This falls if there is immune compromise e.g. HIV+ and CD4 <500 (but may be less of a problem on ART).

So the short answer is that a single dose will be of some help, but may be insufficient in 50-70% if the source was HBV +ve. If there is a history of previous vaccination then of course one dose is enough.

We are then into the numbers game. The risk of HBV exposure depends on the characteristics of the source person- so the HBV prevalence may be around 1.5% in some ethnic groups, IDU, MSM, but about 0.1-0.01% in the general population so absolute risk of exposure might dictate the strategy. This extract is from my biting/ spitting paper with Hannah Pintile*: J Viral Hepat*. 2018;25:1423–1428.

***‘In any assessment of transmission risk at the individual level, we need to know the likelihood of the perpetrator being infectious. The current maximum hepatitis B prevalence in the UK is reported as 1.5%, of whom only 8.5% will be infectious. Therefore, on average only 1:800 attacks will be from someone highly infectious for HBV.’***

A pragmatic approach may be to give a single dose (deferring later doses to after the lockdown) if the source is considered to be outside of a high prevalence HBV group or there is a history of previous vaccination. If the source is considered high risk of HBV carriage, the recipient previously unimmunised and the exposure ‘significant’ then I would say full three doses ultra-rapid schedule are required.

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