

# PREVALENCE OF OCCULT HEPATITIS B VIRUS IN PREMARITAL SAMPLES IN QASSIM REGION, SAUDI ARABIA

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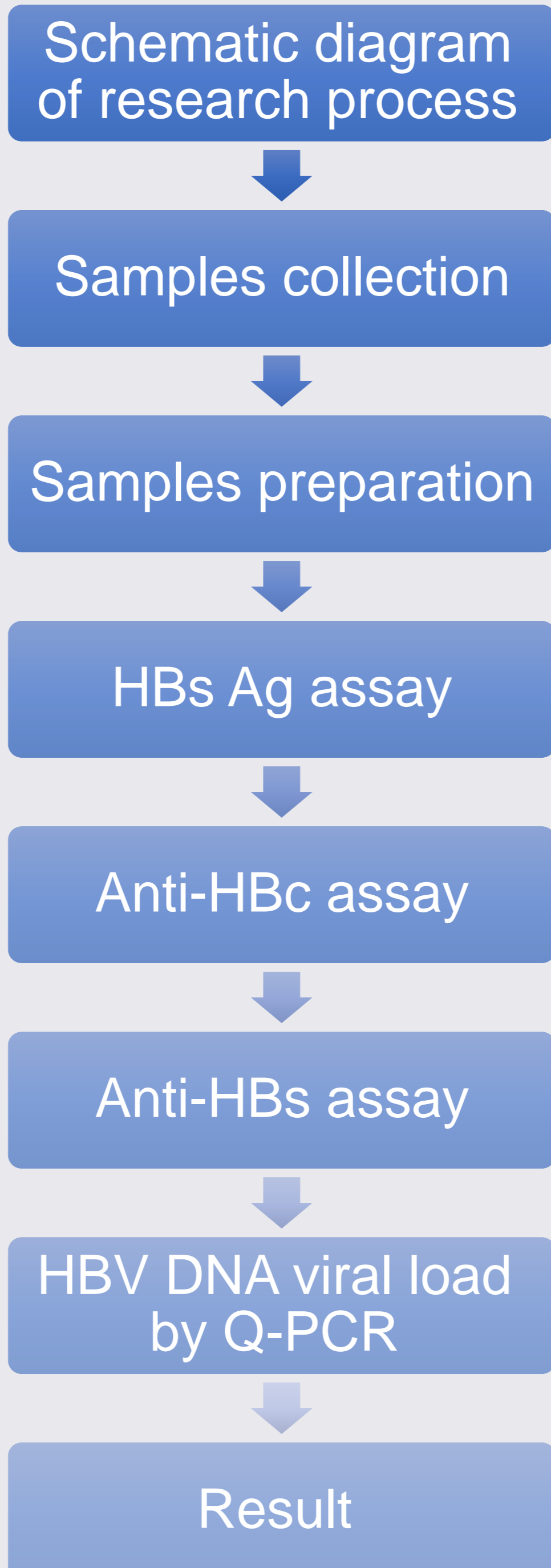
## Background

- ❖ Hepatitis B infection caused by Hepatitis B virus is one of the most important public health threats worldwide (1).
- ❖ However, in some cases, HBsAg appears as negative, which known as occult HBV infection (OBI) (2).
- ❖ The major problems of OBI is the ability to transmit and replicate without HBsAg. Additionally, when infection occurs, it cannot be eradicated by available anti-HBV drugs (3).
- ❖ The importance of OBI is that non-reactive HBsAg may lead to the mutant escape cases in our target population (4, 5).
- ❖ The aim of this study was to investigate the rate of OBI in premarital screening blood samples.

## Methods

- ❖ A cross-sectional study was conducted in public hospitals in Buraydah city during the period between September and November 2018.
- ❖ This study included random collection of 848 samples from both genders from different hospitals in Qassim region, Saudi Arabia.
- ❖ All samples were tested by ELISA technique, and DNA viral load was then detected using Q-PCR.

## Methods



## Results

- ❖ Out of 848 samples, only 28 samples were with reactive anti-HBc, among these there were 4 samples with non-reactive anti-HBs (Figure 1).
- ❖ There also were 4 samples below detecting range among analysis of HBV DNA by Q-PCR.

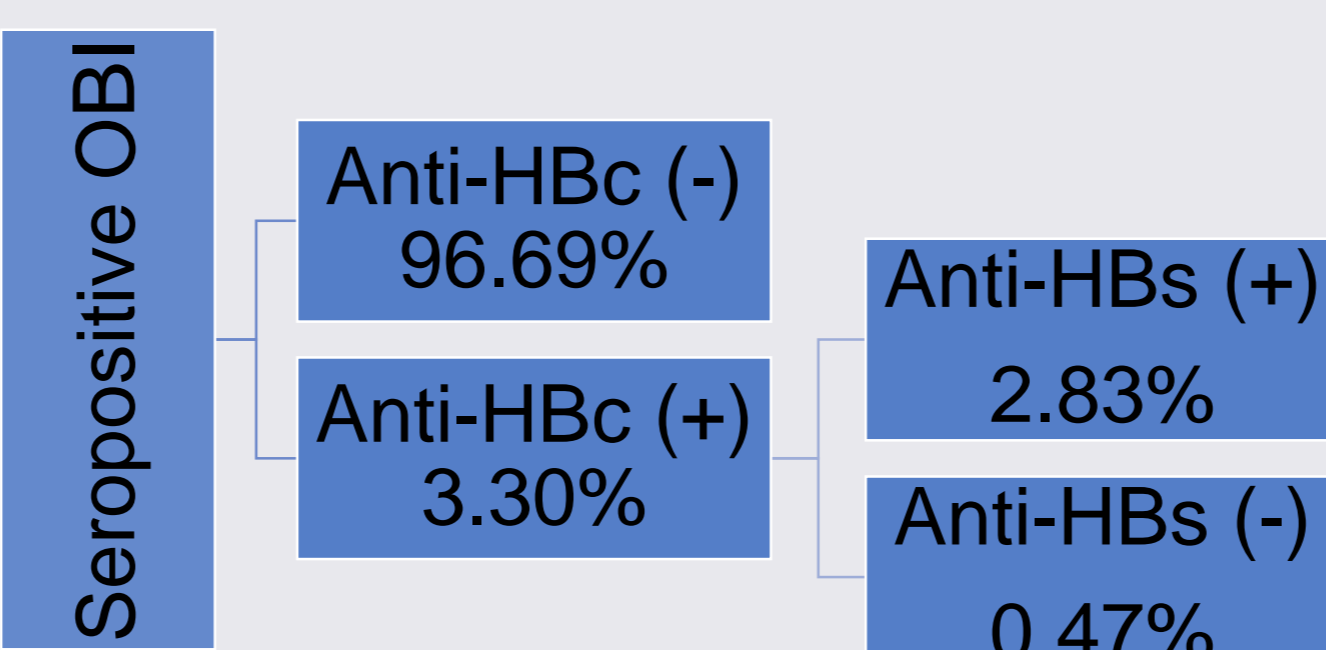


Figure 1: Percentage of HBV antibodies among study subjects.

## Results

- ❖ Among 4 cases having reactive anti-HBc and non-reactive anti-HBs, it was found that all cases were below detecting range using Q-PCR (Table 1).

Table 1: HBV DNA Distribution Based on Gender.

Result	M	F	Total
Positive	0	0	0
Below Detecting Range	2	2	4

## Conclusion

- ❖ The study showed that the probable rate of OBI in Qassim region was 3.30% with no differences in gender or age groups.
- ❖ It is highly recommended to introduce anti-HBc assay screening as a criteria of PMS.
- ❖ Further studies are required to focus on OBI and conduct further investigations with the consideration of family history.

## References

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