

**Epidemiology study of HBV genotypes and antiviral drug resistance
in multi-ethnic regions from Western China**

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Supplementary Table S1. HBV genotypes and clinical characteristics in Han population

| | genotype B | genotype C | P value |
|--|-----------------|-----------------|----------------------|
| n | 409 | 230 | |
| Age | 34.90±10.218 | 37.34±10.334 | 0.004 ^{a,*} |
| Male % (n/N) | 80.4% (329/409) | 80.4% (185/230) | 0.999 ^b |
| HBV-DNA (log ₁₀ copies/ml) | 5.43±1.49 | 5.21±1.52 | 0.25 ^a |
| TB (μmol/L) | 40.62±67.35 | 43.37±77.68 | 0.76 ^a |
| DB (μmol/L) | 24.86±51.49 | 26.00±55.74 | 0.86 ^a |
| ALT (IU/L) | 222.00±437.41 | 180.48±325.65 | 0.40 ^a |
| AST (IU/L) | 152.58±337.50 | 136.58±270.38 | 0.68 ^a |
| ALB (g/L) | 43.19±7.51 | 43.52±6.34 | 0.71 ^a |
| GLB (g/L) | 30.00±5.58 | 30.70±5.10 | 0.29 ^a |
| ALP (IU/L) | 94.73±45.29 | 104.15±53.63 | 0.12 ^a |
| GGT (IU/L) | 53.51±65.05 | 64.27±75.02 | 0.21 ^a |

Note: *, statistically significant; Continuous variables were described as mean±SD.

Table abbreviations: TB, total bilirubin; DB, direct bilirubin; ALT, alanine aminotransferase; AST, aspartame aminotransferase; ALB, albumin; GLB, globulin; ALP, alkaline phosphatase; GGT, gamma glutamyl transpeptidase

^aStudent's *t* test, two-sided.

^b χ^2 test, two-sided.

Supplementary Table S2. Geographic and demographic distribution of HBV antiviral resistant rate in Western China

| Ethnic population | LMV | LdT | ADV | ETV | Total |
|-------------------|-------|-------|-------|------|-------|
| Sichuan Hans | 43.5% | 38.1% | 13.4% | 4.2% | 47.5% |
| Sichuan Yis | 17.4% | 17.4% | 6.5% | 0.0% | 23.9% |
| Qinghai Tibetans | 14.3% | 4.8% | 4.8% | 0.0% | 19.0% |
| Xinjiang Hans | 16.7% | 0.0% | 0.0% | 0.0% | 16.7% |
| Xinjiang Uygurs | 8.7% | 2.2% | 0.0% | 0.0% | 8.7% |
| Tibet Tibetans | 4.4% | 0.0% | 0.0% | 0.0% | 4.4% |
| Sichuan Tibetans | 3.2% | 0.0% | 0.0% | 0.0% | 3.2% |

Note: LMV, lamivudine; LdT, telbivudine; ADV, adefovir; ETV, entecavir.

Supplementary Table S3. HBV genotypes and antiviral resistance in Han population

| | LMV resistance n (%) | LdT resistance n (%) | ADV resistance n (%) | ETV resistance n (%) | Overall resistant rate n (%) |
|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|------------------------------------|
| B (n=409) | 172(42.1%) | 153(37.4%) | 39(9.5%) | 19(4.7%) | 192(46.9%) |
| C (n=230) | 106(46.1%) | 91(39.6%) | 46(20.0%) | 8(3.5%) | 112(48.7%) |
| P value ^a | 0.324 | 0.590 | 0.000* | 0.481 | 0.670 |

Note: *, statistically significant; LMV, lamivudine; LdT, telbivudine; ADV, adefovir; ETV, entecavir.

^a χ^2 test, two-sided.

Supplementary Table S4. The prevalence of mutations in different HBV genotypes in lamivudine-resistance Sichuan Han patients

| | rtV173L N(%) | rtL180M N(%) | rtA181V/T/S N(%) | rtM204V N(%) | rtM204I N(%) | rtV207M/I/L N(%) | rtS213T N(%) |
|----------|--------------------|----------------------|----------------------|--------------------|--------------------|---------------------|--------------------|
| B(N=172) | 3(1.7%) | 62(36.1%) | 18(10.5%) | 52(30.2%) | 96(55.8%) | 10(5.8%) | 9(5.2%) |
| C(N=106) | 4(3.8%) | 58(54.7%) | 31(29.3%) | 23(21.7%) | 50(47.2%) | 8(7.6%) | 5(4.7%) |
| p value | 0.433 ^a | 0.002 ^{b,*} | 0.000 ^{b,*} | 0.119 ^b | 0.161 ^b | 0.568 ^b | 0.849 ^b |

Note: *, statistically significant.

^aFisher's exact test, two-sided.

^b χ^2 test, two-sided.

Supplementary Table S5. The prevalence of mutations in different HBV genotypes in telbivudine-resistant Sichuan Han patients

| | rtV173L N(%) | rtL180M N(%) | rtT184A/I/S N(%) | rtS202G N(%) | rtM204V N(%) | rtM204I N(%) | rtM250L N(%) |
|----------|--------------------|----------------------|---------------------|--------------------|--------------------|--------------------|--------------------|
| B(N=153) | 3(1.9%) | 62(40.5%) | 5(3.3%) | 9(5.9%) | 48(31.4%) | 96(62.8%) | 2(1.3%) |
| C(N=91) | 4(4.4%) | 58(63.7%) | 5(5.5%) | 1(1.1%) | 22(24.2%) | 50(54.9%) | 0(0.0%) |
| P value | 0.429 ^a | 0.000 ^{b,*} | 0.507 ^a | 0.096 ^b | 0.229 ^b | 0.229 ^b | 0.530 ^a |

Note: *, statistically significant.

^aFisher's exact test, two-sided.

^b χ^2 test, two-sided.

Supplementary Table S6. The prevalence of mutations in different HBV genotypes in adefovir-resistant Sichuan Han patients

| | rtA181V/T/S N(%) | rtN236T N(%) |
|----------------------|---------------------|-----------------|
| B(N=39) | 21(53.9%) | 26(66.7%) |
| C(N=46) | 18(39.1%) | 6(13.0%) |
| P value ^a | 0.175 | 0.000* |

Note: *, statistically significant.

^a χ^2 test, two-sided.

Supplementary Table S7. The prevalence of mutations in different HBV genotypes in entecavir-resistant Sichuan Han patients

| | rtL180M N(%) | rtT184A/I/S/L N(%) | rtS202G N(%) | rtM204V N(%) | rtM204I N(%) | rtM204V/I N(%) | rtM250L N(%) |
|----------------------|-----------------|-----------------------|-----------------|-----------------|-----------------|-------------------|-----------------|
| B(N=18) | 17(94.4%) | 8(44.4%) | 9(50.0%) | 15(83.3%) | 2(11.1%) | 1(5.6%) | 2(11.1%) |
| C(N=6) | 6(100%) | 5(83.3%) | 1(16.7%) | 4(66.7%) | 1(16.7%) | 1(16.7%) | 0 (0.0%) |
| P value ^a | 1.000 | 0.166 | 0.341 | 0.394 | 1.000 | 0.446 | 1.000 |

Note: ^aFisher's exact test, two-sided.