Supplementary table 1. Detailed characteristics of all studies excluded after in-depth analysis for the association with serum resistin levels and **gestational diabetes mellitus**.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Author, year | Location | Study design | Number  GDM/C | GDM diagnosis | Time for sampling | Assay  method | Serum/  plasma | Resistin levels, ng/ml Mean(SD) | | | Reason for  Excluded |
| GDM | Control | *p* |
| Akdeniz *et al*, 2017[[20](#_ENREF_20)] | Turkey | CC | 49/28 | NI | ? | Bead array analysis | Serum | 0.619(0.557) | 4.803(2.527) | <0.001 | No sampling  time |
| Pagan *et al*, 20141[[44](#_ENREF_44)] | Spain | Cohort | 45/25 | 100 g NDDG | 24-28 wk | HADK1-61K-A LINCOplex kit | Serum | ? | ? | NS | No data |
|  |  |  |  |  | At delivery |  |  | ? | ? | NS |  |
| Noureldeen *et al*, 20142[[23](#_ENREF_23)] | Saudi Arabia | CC | 24/33 | 75 g WHO? | 2nd trimester | ELISA | Serum | 11.27(0.28) | 5.33(0.11) | 0.0003 | Criteria  problem |
|  |  |  | 47/38 |  | 3rd trimester |  |  | 14.75(0.22) | 8.68(0.09) | 0.0001 |  |
| Karatas *et al*, 20143[[36](#_ENREF_36)] | Turkey | CS | 40/40 | 100 g Carpenter and Coustan | 24-28 wk | ELISA | Serum | 4.177(0.434) | 5.301(0.428) | NS? | Data problem |
| Zheng *et al*, 20114[[26](#_ENREF_26)] | China | CC | 32/30 | 75 g two or more:  Fasting≥5.6,  1 h≥10.3,  2 h≥8.6, 3 h≥6.7 mmol/l | 28-32 wk | ELISA | Serum | 10.63(4.13) | 6.45(1.02) | < 0.01 | NOS  total  score  4 |
| Chen *et al*, 20075[[19](#_ENREF_19)] | China | CS | 20/20 | 100 g NDDG | On delivery day | ELISA | Serum | 62.38(?) | 22.21(?) | <0.001 | Data problem |
| Lappas *et al*, 20056[[51](#_ENREF_51)] | Australia | CC | ?/? | 75 g ADIPS | >37 wk | ELISA | Serum | 2.3(0.15) | 3.4(0.59) | NS | Sample size  unconfirmed |

CC: Case-control study; CS: Cross-sectional study; ADA: American Diabetes Association; IADPSG: International Association of Diabetic Pregnancy Study Group; WHO: World Health Organization; NDDG: National Diabetes Data Group; ADIPS: Australasian Diabetes in Pregnancy Society; RIA: Radio Immunoassay; NS: nonsignificant.

1 The resistin levels of the GDM and control groups in “Pagan *et al*, 2014” were shown in figures as histogram only.

2 In the study of “Noureldeen *et al*, 2014”, GDM was diagnosed according to the World Health Organization, fasting plasma glucose ≥7.0 mmol/l or plasma glucose after 2 h ≥7.8 mmol/l. WHO Criteria have two version: 75 g fasting plasma glucose ≥6.1 mmol/l **and** plasma glucose after 2 h ≥7.8 mmol/l; fasting plasma glucose ≥7.0 mmol/l **or** plasma glucose after 2 h ≥11.1 mmol/l. According to the diagnostic criteria in “Noureldeen *et al*, 2014”, GDM can be diagnosed as long as plasma glucose after 2 h ≥7.8 mmol/l. This criteria does not meet WHO Criteria and is not strict enough.

3 In the study of “Karatas *et al*, 2014”, independent samples t-test was used to compare the resistin levels between the groups, we used the same method to analyze the data in the table and got a significantly different *p* value from the *p* value in the table.

4The NOS total score of the study of Zheng *et al* was 4. The score come from the following items: case definition adequate, definition of controls, ascertainment of exposure, and same method of ascertainment for cases and controls.

5 In the study of Chen *et al*, the evaluation indicators of discrete trends were not uniform in the article and were not clearly stated for resistin level.

6 The numbers of samples were inconsistent between the text and the table in “Lappas *et al*, 2005”.