Supplement Table1 Characteristics of the published studies included in the meta-analysis.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Study** | **Publication year** | **Study period** | **Location** | **Population** | **Case(n)** | **Control(n)** | **Case factor** | **Control factor** |
| Friedmann PS | 1981 | - | England | Adults/children | 108 | 2779 | 73F 35M, 11–75 years | 1494F 1285M, another local population survey |
| Al-Khawajah M | 1991 | - | Saudi | Adults/children | 92 | 88 | 47F 45M, 1–44 years(18.9±11.2 years), active disease, including alopecia totalis and alopecia universalis  | 45F 43M, normal healthy matched for sex, age |
| Puavilai S | 1994 | 1986–1991 | Thailand | Adults/children | 152 | 152 | 81F 71M, 10–59 years(29.34±9.98 years) | age and sex- matched volunteer skin disease other than alopecia areata or autoimmune diseases |
| Kuamr B | 1995 | - | India | - | 104 | 100 | 42F 62M | age and sex-matched |
| Sharma VK | 1996 | 1983–1992 | India | Adults/children | 808 | 572 | 276F 532M 196C, including severe alopecia areata | 202F 370M,age and sex-matched |
| Zhang X | 2005 | - | China | Children | 105 | 30 | 54F 51M, 1.6–18 years | healthy children, 14F 16M |
| Thomas EA | 2008 | a period of 1 year | India | Adults | 71 | 71 | M:F 2：1, including severe alopecia areata, alopecia totalis and alopecia universalis | age and sex-matched volunteer skin disease other than alopecia areata  |
| Kasumagic–Halilovic E | 2008 | - | Sarajevo | Adults/children | 70 | 30 | 38F 32M, 4–72 years(mean age 31.2 years) | 16F 14M(mean age 34.7) |
| Fang J | 2009 | - | China | Children | 105 | 30 | 54F 51M, 2.7–17 years | 14M 16F, healthy children |
| Kasumagic-Halilovic E | 2010 | - | Sarajevo | Adults/children | 50 | 50 | 26F 24M, 7–72 years | 26F 24M, age and sex-matched volunteer skin disease other than alopecia areata or autoimmune diseases |
| Bakry OA | 2014 | 2009.6–2010.2 | Egypt | Adults/children | 50 | 50 | 13F 37M, 6–50 years（26.38±10.85 years） | 15F 35M, normal healthy matched for sex, age |
| Miller R | 2015 | 2005–2014 | America | Adults | 584 | 172 | 400F 184M, 35.54±19.28 years | 126F 46M, 35.8±15.56 years, seborrheic dermatitis |
| He L | 2016 | 2015–2016 | China | Adults/children | 132 | 100 | 84F 48M, 13–60 years(36.8±8.4 years) | 64F 36M, 14–58 years (35.9±8.2 years), healthy volunteer |
| Bin S | 2016 | 2015.3–2015.8 | Saudi | Adults/children | 100 | 50 | Fifty severe AA patients (26F, 24M) aged between 10 and 43 years (mean age 21.5±7.7 years), 50 mild AA patients (26F, 24M) aged between 6 and 54 years (mean age 23.9±10.4 years) | 8–47 years(22.4±7.5 years), normal healthy matched for sex, age |
| Ghaffari J | 2017 | - | Iran | Children | 50 | 150 | 13F 37M, children，14.26±2.55 years， | 73F 77M, 11.92±3.19 years, healthy subject |
| He H | 2017 | 2014.3–2015.7 | China | Adults/children | 111 | 85 | 63F 48M, 1–64 years(32.34±14.93 years), including alopecia totalis and alopecia universalis | 43F 32M, 2–68 years (30.41±12.52 years) |
| Wang H | 2017 | 2014–2015 | China | Adults | 158 | 158 | 74F 84M, mean age 40 years(18–65 years) | normal healthy matched for sex, age |