Dear Editor:
The prognosis of alopecia areata (AA) during childhood may be worse in comparison to cases involving adult patients. However, there is no concrete evidence for this assumption because it is based on a small number of studies on Asian subjects with insufficient long-term follow-up data. Disease progression in children with AA is also more difficult to predict in comparison to adults. It is possible that prognosis is worse because disease progression in children with mild AA is not necessarily better. When AA progresses to alopecia totalis (AT) or alopecia universalis (AU), long-term prognosis with respect to full recovery is generally reported at a frequency of less than 10%. However, the data for this result is outdated and was reported in the 1950s, thereby making evidence unreliable.

Recently, we evaluated the long-term prognosis of patients with AT or AU and found that it is better than previously thought. Long-term outcome evaluation of patients with AA is important. Because AA is associated with frequent recurrence, it is difficult to determine whether complete recovery has occurred when AA progresses to more severe conditions. Our previous study suggests that at least 5 years of follow-up observation is required to predict the long-term prognosis of patients with AA.

In this study, we investigated the long-term prognosis (>10 years) of children and adolescents (≤19 years old) with AA. Among 140 patients with pediatric AA from our outpatient database, 75 who were available for follow-up observations for long-term prognosis via their medical records and phone surveys were included. This study was...
Table 1. Demographic and clinical characteristics of children and adolescents with alopecia areata

| Characteristic | S1 (n=27) | S2 (n=14) | S3 (n=5) | S4 (n=9) | AT (n=8) | AU (n=12) | Total (n=75) |
|----------------|-----------|-----------|----------|----------|----------|----------|--------------|
| Sex (patient no.) |           |           |          |          |          |          |              |
| Male            | 15        | 8         | 2        | 5        | 4        | 7        | 41           |
| Female          | 12        | 6         | 3        | 4        | 4        | 5        | 34           |
| Age (yr)        |           |           |          |          |          |          |              |
| Onset           | 7.2±4.1   | 9.6±4.9   | 5.0±5.2  | 11.9±4.1 | 7.9±4.9  | 7.6±5.3  | 8.2±4.8      |
| Initial visit   | 7.7±4.3   | 10.2±4.8  | 7.2±5.5  | 13.6±3.0 | 10.6±6.1 | 12.0±5.9 | 9.9±5.1      |
| Current         | 18.2±4.5  | 21.6±5.1  | 17.9±4.0 | 25.2±4.5 | 25.5±5.8 | 25.9±6.5 | 21.7±6.0     |
| Duration (yr)   |           |           |          |          |          |          |              |
| Onset of alopecia | 11.0±3.3  | 12.0±3.1  | 12.9±1.7 | 13.3±3.3 | 17.6±1.9 | 18.3±7.0 | 13.5±4.8     |
| First visit     | 10.4±2.4  | 11.4±3.0  | 10.7±2.4 | 11.6±3.1 | 14.9±1.7 | 13.9±3.1 | 11.8±3.0     |

Values are presented as number or mean±standard deviation. S1: <25% hair loss, S2: 25%～49% hair loss, S3: 50%～74% hair loss, S4: 75%～99% hair loss, AT: alopecia totalis, AU: alopecia universalis.
Table 2. Long-term outcomes of patients with AA in children and adolescents (n=75), based on known prognostic factors and main therapeutic modalities

| Prognostic factors | No hair regrowth or aggravation | Partial hair regrowth | Complete hair regrowth |
|--------------------|---------------------------------|------------------------|------------------------|
|                    | <10%                            | 10%～49%               | 50%～89%               | ≥90%                   |
| Clinical type of AA |                                 |                        |                        |                        |
| S1 (n=27)          | 5 (18.5)                        | 2 (7.4)                | 3 (11.1)               | 3 (11.1)               | 14 (51.9)              |
| S2 (n=14)          | 3 (21.4)                        | 1 (7.1)                | 1 (7.1)                | -                      | 2 (14.3)               | 7 (50.0)               |
| S3 (n=5)           | 1 (20.0)                        | -                      | -                      | 3 (60.0)               | 1 (20.0)               |
| S4 (n=9)           | 4 (44.4)                        | 1 (11.1)               | 2 (22.2)               | -                      | -                      | 2 (22.2)               |
| AT (n=8)           | 3 (37.5)                        | 2 (25.0)               | 1 (12.5)               | 1 (12.5)               | 1 (12.5)               |
| AU (n=12)          | 8 (66.7)                        | 1 (8.3)                | 1 (8.3)                | -                      | 1 (8.3)                |
| Total (n=75)       | 24 (32.0)                       | 3 (4.0)                | 8 (10.7)               | 5 (6.7)                | 9 (12.0)               | 26 (34.7)              |
| Clinical type of AA (patients with onset earlier than 10 years of age) |                                 |                        |                        |                        |
| S1 (n=21)          | 4 (19.0)                        | 2 (9.5)                | 3 (14.3)               | 2 (9.5)                | 10 (47.6)              |
| S2 (n=7)           | 2 (28.6)                        | -                      | -                      | -                      | 4 (57.1)               |
| S3 (n=4)           | 1 (25.0)                        | -                      | -                      | 2 (50.0)               | 1 (25.0)               |
| S4 (n=2)           | -                               | 1 (50.0)               | -                      | 1 (50.0)               |
| AT (n=4)           | 1 (25.0)                        | 2 (50.0)               | -                      | 1 (25.0)               |
| AU (n=8)           | 5 (62.5)                        | 1 (12.5)               | 1 (12.5)               | 1 (12.5)               | -                      |                        |
| Total (n=46)       | 13 (28.3)                       | 2 (4.3)                | 6 (13.0)               | 4 (8.7)                | 5 (10.9)               | 16 (34.8)              |
| Clinical type of AA (patients with onset aged 10～19 years) |                                 |                        |                        |                        |
| S1 (n=6)           | 1 (16.7)                        | -                      | -                      | 1 (16.7)               | 4 (66.7)               |
| S2 (n=7)           | 1 (14.3)                        | 1 (14.3)               | -                      | 2 (28.6)               | 3 (42.9)               |
| S3 (n=1)           | -                               | -                      | -                      | 1 (100.0)              |
| S4 (n=7)           | 4 (57.1)                        | 1 (14.3)               | 1 (14.3)               | -                      | 1 (14.3)               |
| AT (n=4)           | 2 (50.0)                        | -                      | 1 (25.0)               | -                      | 1 (25.0)               |
| AU (n=4)           | 3 (75.0)                        | -                      | -                      | 1 (25.0)               |
| Total (n=29)       | 11 (37.9)                       | 1 (3.4)                | 2 (6.9)                | 1 (3.4)                | 4 (13.8)               | 10 (34.5)              |
| The period from onset of alopecia |                                 |                        |                        |                        |
| <8 yr (n=40)       | 7 (17.5)                        | 1 (2.5)                | 4 (10.0)               | 4 (10.0)               | 6 (15.0)               | 18 (45.0)              |
| 9～12 yr (n=19)    | 6 (31.6)                        | -                      | 3 (15.8)               | 1 (5.3)                | 2 (10.5)               | 7 (36.8)               |
| ≥13 yr (n=16)      | 11 (68.8)                       | 2 (12.5)               | 1 (6.3)                | -                      | 1 (6.3)                | 1 (6.3)                |
| Total (n=75)       | 24 (32.0)                       | 3 (4.0)                | 8 (10.7)               | 5 (6.7)                | 9 (12.0)               | 26 (34.7)              |
| Duration of the disease at time of first visit |                                 |                        |                        |                        |
| <3 mo (n=25)       | 5 (20.0)                        | 1 (4.0)                | 2 (8.0)                | 2 (8.0)                | 2 (8.0)                | 13 (52.0)              |
| 3～12 mo (n=26)    | 8 (30.8)                        | 1 (3.8)                | 5 (19.2)               | 1 (3.8)                | 2 (7.7)                | 9 (34.6)               |
| 13～24 mo (n=11)   | 5 (45.5)                        | -                      | -                      | -                      | 2 (18.2)               | 4 (36.4)               |
| 2～5 yr (n=5)      | 1 (20.0)                        | -                      | 2 (40.0)               | 2 (40.0)               | -                      |                        |
| >5 yr (n=8)       | 5 (62.5)                        | 1 (12.5)               | 1 (12.5)               | 1 (12.5)               | -                      |                        |
| Total (n=75)       | 24 (32.0)                       | 3 (4.0)                | 8 (10.7)               | 5 (6.7)                | 9 (12.0)               | 26 (34.7)              |
| Concomitant atopic diseases |                                 |                        |                        |                        |
| Yes (n=30)         | 8 (26.7)                        | 1 (3.3)                | 4 (13.3)               | 3 (10.0)               | 4 (13.3)               | 10 (33.3)              |
| No (n=45)          | 16 (35.6)                       | 2 (4.4)                | 4 (8.9)                | 2 (4.4)                | 5 (11.1)               | 16 (35.6)              |
| Total (n=75)       | 24 (32.0)                       | 3 (4.0)                | 8 (10.7)               | 5 (6.7)                | 9 (12.0)               | 26 (34.7)              |
| Main therapeutic modalities |                                 |                        |                        |                        |
| Diphenylcyclopropenone (n=15) | 9 (60.0)                        | -                      | 3 (20.0)               | 1 (6.7)                | 1 (6.7)                | 1 (6.7)               |
| Systemic immunosuppressants (n=5) | 2 (40.0)                        | -                      | 1 (20.0)               | -                      | 1 (20.0)               | 1 (20.0)               |
| Topicals (n=31)    | 3 (9.7)                         | 1 (3.2)                | 2 (6.5)                | 2 (6.5)                | 4 (12.9)               | 19 (61.3)              |
| Combined and/or intercurrent (n=16) | 8 (50.0)                        | 2 (12.5)               | 1 (6.3)                | 1 (6.3)                | 1 (6.3)                | 3 (18.8)               |
| Others (n=8)       | 2 (25.0)                        | -                      | 1 (12.5)               | 1 (12.5)               | 2 (25.0)               | 2 (25.0)               |
| Total (n=75)       | 24 (32.0)                       | 3 (4.0)                | 8 (10.7)               | 5 (6.7)                | 9 (12.0)               | 26 (34.7)              |

Values are presented as number (%). S1: <25% hair loss, S2: 25%～49% hair loss, S3: 50%～74% hair loss, S4: 75%～99% hair loss, AA: alopecia areata, AT: alopecia totalis, AU: alopecia universalis.
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CONFLICTS OF INTEREST

The authors have nothing to disclose.

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