Alopecia Areata

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Definition

Alopecia areata (AA) is a common disease that causes loss of hair on the scalp and elsewhere. AA may cause patchy hair loss over vast portions of the scalp. Any hairbearing area on the body may be affected. AA occurs at all ages although children are affected most often and the disease affects males and females equally. Patients with AA are otherwise healthy, although they may have a higher incidence of atopic conditions such as atopic eczema, allergic rhinitis and asthma. The condition is not contagious.

Etiology

It is not possible to attribute all or indeed any case of AA to a single cause. Among many factors, which appear to be implicated in at least a portion of cases, are the patient's genetic constitution, the atopic state, non-specific immune and organspecific autoimmune reactions and possibly emotional stress.

Genetic Factors

The incidences of a family history of AA have been reported as from 4-27%. The mode of inheritance is thought to be autosomal dominant with variable penetrance. Racial factors may also be important.

Autoimmunity

There is widespread agreement with the hypothesis that AA is an autoimmune disease despite the fact that the evidence is at best circumstantial. Support has come from three main areas of research: association with autoimmune diseases, humoral immunity and cell-mediated immunity.

Thyroid disease is the most frequently described disease in association with AA but the published figures are contradictory. Muller and Winkelmann, in the largest study reported to date, found evidence of thyroid disease in 8% of 736 cases compared with less than 2% in the control population in North America. Milgraum and co-workers found 24% of 45 children less than 16 years with AA to have abnormal thyroid function tests and/or elevation of thyroid microsomal antibody levels. Reliable statistics based on the prospective study of large numbers of patients are lacking. Kern has found a statistically significant association between AA and Hashimoto's disease, pernicious anaemia and Addison's disease. Brown and coworkers have suggested an increased incidence of autoimmune and gonadal disease in male AA patients, but these findings remain unconfirmed. Most authors accept the association of vitiligo with AA. Muller and Winkelmann reported an incidence of 4%. The following disorders, all of a possible immunological nature, have also been reported in association with AA: pernicious anaemia, systemic lupus erythematosus and rheumatoid arthritis, polymyalgia rheumatica, myasthenia gravis, ulcerative colitis, lichen planus and the candida-endocrinopathy syndrome.

Humoral immunity

Studies of organ-specific antibodies in AA have given conflicting results, perhaps due to small groups of patients and controls and differing methodology. Galbraith and co-workers also found an increase in thyroid autoantibodies. Friedmann, in a controlled study of 229 cases, reported increased frequencies of thyroid antibodies in 30% of females and 10% of males, and an increased frequency of gastric parietal cell antibodies which tended to be more common in males. In 45 children under 16 years of age with AA, Milgraum and coworkers found detectable antibody levels to thyroid microsomal elements (11%), smooth muscle (16%), and parietal cells (4%).

Cell-mediated immunity

Studies of cell-mediated immunity in AA also yield an inconsistent picture; again, small studies have led to conflicting results. Circulating total T-cell numbers have been reported as reduced or normal. Suppressor T-cell numbers have been variously reported as reduced, normal, or increased. Gu and co-workers also reported an increase in non-antigen-specific spontaneous and antibodydependent cell-mediated cytotoxic responses of peripheral blood lymphocytes. Friedmann attempted to resolve this conflict by suggesting that while there is general agreement that a reduction in numbers of circulating T-cells occurs in AA, the level of reduction is related to disease severity. Similarly, the impairment of helper T-cell function and the change in suppressor T-cell numbers may also reflect changes in disease activity.

The strongest direct evidence for autoimmunity comes from the consistent findings of a lymphocytic infiltrate in and around hair follicles, and Langerhans cells have also been seen in the peribulbar region. Biopsies from scalps of patients treated with the contact allergen diphencyprone, or oral and topical minoxidil have shown a reduction in the peribulbar T-cell population in regrowing AA, but no change in the absence of regrowth. Direct immunofluorescent examination has failed to demonstrate antifollicle antibodies in affected scalps. Friedmann was unable to demonstrate a response of lymphocytes from patients with AA to crude scalp extract in vitro. Messenger and Bleehen reported ectopic expression of MHC type II antigen HLA-DR by epithelial cells in the presumptive cortex and root sheaths of hair follicles in active lesions of AA. This is thought to represent a mechanism through which cells may present their own specific surface antigens to sensitized MHC-restricted T-inducer cells.

Therefore, AA appears to belong to the group of organ-specific autoimmune diseases. There is a shared hereditary susceptibility, organ-specific antibodies occur with increased frequency in patients with AA, and there is altered T-cell regulation of the immune response. However, unlike most organ-specific autoimmune diseases, direct activity against hair follicle components has yet to be demonstrated. Further research in this area is obviously required. Prospective long-term studies and the relationship between lymphocyte and disease activity are worthy of further attention.

Emotional stress

A wealth of case-lore suggests that stress may be an important precipitating factor in some cases of AA. Attempts at objective evaluation using standard psychiatric procedures such as the Rorschach test showed over 90% of patients with AA to be psychologically abnormal and up to 29% to have psychological factors and family situations that may have affected the onset or course of the diseases. Alleged cures by suggestion or sleep therapy have been claimed to support the stress hypothesis. The findings of Ferraro using the Bernereuter personality index in AA showed 'feeling of inferiority, introspection and a need for encouragement'.

Clinical Features

The characteristic initial lesion of AA is commonly a circumscribed totally bald, smooth patch (Fig. 1); it is often noticed by chance by a parent, hairdresser or friend. Exclamation-mark hairs (Fig. 2) may be present at its margin, where hairs, which appear normal, may also be very readily extracted. Subsequent progress is very varied; the initial patch may regrow within a few months, or further patches may appear after an interval of 3-6 weeks and then in a cyclical fashion. These intervals are of varying duration. A succession of discrete patches may rapidly become confluent by the diffuse loss of remaining hair. In some cases the initial hair loss is diffuse and total denudation of the scalp has been reported within 48 hours.

However, diffuse hair loss may occur over part or the whole of the scalp without the development of bald areas. Regrowth is often at first fine and unpigmented, but usually the hairs gradually resume their normal calibre and color. Regrowth in one region of the scalp may occur whilst the alopecia is extending in others.

The scalp is the first affected site in over 60% of cases. In dark-haired men patches in the beard are conspicuous and in such individuals are often the first to be noticed. The eyebrows and eyelashes are lost in many cases of AA and may be the only sites affected. The term alopecia totalis is applied to total or almost total loss of scalp hair and alopecia







universalis is the loss of all body hair. The extension of alopecia along the scalp margin is known as ophiasis (Fig. 3). AA strictly confined to one-half of the body has been reported after a head injury.

Homoeopathic Treatment

In Homoeopathy Alopecia Areata can be successfully treated with the following medicines:

- Acid Flour: Hair Falling in Spots. Alopecia Areata. Hair sticks together, dry, and breaks off.
- **Phosphorus:** Falling of the hair in large bunches, in spots, white dandruff with itching. Alopecia areata after anger, grief, worry, excessive use of Iodine, Iodized Salt.
- **Tuberculinum:** Alopecia Areata or universalis. Use as a constitutional remedy especially in those patients where history of Tuberculosis is present.
- **Cal Carb:** Use as a constitutional remedy in persons of scrofulous type who are sensitive to cold. Alopecia from overwork, worry, fright, poor nutrition. Specific for persons who have blood group O.
- **Psorinum:** Use as a constitutional remedy to those patients who had suppressed skin or glandular disease/s. Hair dry, lusterless, tangles easily. Humid eruptions on head, with hair sticking together. Spots of white skin with white lock of hair.
- Vinca minor: Alopecia Areata, oozing moisture eruptions, matting hair together. Corrosive itching of scalp. Plica polonica. Irresistible desire to scratch. Hair replaced by a white, gray or wooly hair in the patchy area.
- **Graphites:** Alopecia Areata especially of temples & vertex area of head.
- Baryta Carb: Alopecia universalis.
- **Silicea:** Falling of hair in intellectual types. Premature balding (Young age). Ill effects of checked sweat of feet, vaccination, overwork mental of physical.
- Kali Carb: Hair dry, falls out from eyebrows, temples & beard. Great dryness of the hairs.
- **Natrum Mur:** Falling of hair, especially of Forehead, temples, & whiskers. Ill effects of grief, guilt, disappointment, fright, fit of passion, loss f fluids, masturbation, and anemia.
- Lycopodium: Loss of hair or gray hair at young age. Premature baldness after abdominal affections, dandruff. Ill effects of tobacco chewing and Wine.
- **Borax:** End of hair tangles easily and can't be separated easily as in Plica Polinica.
- **Mezerium:** Hair sticks together. Scalp and hair sensitive to touch. Hair falls out in handfuls with dandruff white & dry. Ill effects of suppressed eruptions of scalp, vaccination & mercury.
- Selenium: Loss of hair from eyebrows, whiskers & genitals. Alopecia. Hair painful to touch.
- **Sepia:** Falling of hair due to hormonal changes in females. Hair falls out with a history of Chronic Headaches. Root of the hair is sensitive to combing.
- Zinc Met: Hair brittle, bristle and sensitive. Vertex bald with soreness of scalp.

References

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