General practitioners’ knowledge and practices related to alopecia areata in Qassim region, Saudi Arabia
Abdullateef A. Alzolibani

Department of Dermatology, College of Medicine, Qassim University, Qassim, Saudi Arabia
Correspondence to Abdullateef Alzolibani, MD, Department of Dermatology, College of Medicine, Qassim University, P.O. Box 30109, Buraidah 51477, Qassim, Saudi Arabia
Tel: +966 6 3800050 x2862; fax: +966 6 3801228; e-mail: azolibani@yahoo.com
Received 26 September 2011
Accepted 27 December 2011


Background and objectives
The importance of alopecia areata (AA) originated from the social acceptance of its psychological and emotional consequences. This study aimed to explore the knowledge and practices of general practitioners regarding the disease in Qassim region, Saudi Arabia, to obtain baseline data to aid in quality improvement of the available health services.

Subjects and methods
The study included 142 general practitioners working in primary healthcare centers in the Qassim region. Knowledge on causes, risk factors, and treatment practices was obtained using a self-administered structured questionnaire.

Results
The mean (± SD) age of participants was 42.9 ± 7.8 years. More than 35.0% of them had work experience of less than 10 years. Nineteen percent of the participants had low knowledge score, with significant difference in sex and years of work experience. Approximately 45.8% of surveyed doctors reported AA to be an autoimmune disease, 68.3% incorrectly responded that AA is more common in male patients, 64.1% recognized that family history is important, 26.1% blamed personal hygiene, and 16.2% thought that AA is a communicable disease. With regard to management, 45.7% of participants prescribed local steroids for treatment; however, 25.3% prescribed only multivitamins.

Conclusion and recommendations
That general practitioners in the Qassim region have satisfactory knowledge of AA, and most of them engage in fair treatment practices. However, there are still some gaps in different aspects that warrant continuous educational programs to improve their quality and performance.

Keywords:
alopecia areata, general practitioners, primary healthcare

Introduction
Alopecia areata (AA) is a common condition causing non-scarring hair loss that mostly occurs in patches but in cases may involve the entire scalp (alopecia totalis) or the whole body (alopecia universalis) [1]. AA accounts for 1–2% of cases seen in dermatology clinics in the UK and USA [2]. The patient usually recovers spontaneously but may experience a course of recurrent relapses. AA rarely results in permanent hair loss [3]. Onset may occur at any age, but in 60% of cases it starts before the age of 20 years [4]. Usually there is equal distribution among both sexes [5]. Approximately 20% of affected people have a family history of the disease, suggesting genetic predisposition [6]. Although autoimmune factors have been suggested as being pathogenic, it remains a disease of unknown etiology [7].

AA has increased incidence in patients with Down’s syndrome, psoriasis, thyroid disease, diabetes mellitus, vitiligo, and rheumatoid arthritis [8]. Although the disease usually affects the scalp, all hair bearing areas of the skin may be involved [9]. The pattern and severity of hair loss vary greatly. Poor prognosis is associated with other immune diseases, family history of AA, early age at onset, nail involvement, and extensive hair loss [10,11]. The role of stressful events in the appearance of AA is uncertain [12]. As hair follicles are not destroyed in AA, there is a potential for regrowth [13].

AA can cause significant psychological problems. The cornerstone of management is counseling of the patient and his family members [7] and helping them to cope with the condition. This represents one of the main roles of general practitioners (GPs) working in primary healthcare centers (PHCCs). AA is a common skin disease in Saudi Arabia [14–17]. Data on knowledge and practices of GPs working in primary care settings related to the disease are deficient in literature. Primary healthcare is the backbone of health provision to the public. Therefore, such data constitute an essential foundation for quality management of the available healthcare services that impact the patients’ quality of life.

The objective of this study was to explore the knowledge and practices related to AA among GPs working in PHCCs of Qassim Province, Saudi Arabia.
Participants and methods
The study was approved by the ethical committee of the College of Medicine, Qassim University, Saudi Arabia. All participants were informed about the research objectives and methodology, and a verbal consent was obtained from all participants. This study was in the form of a cross-sectional survey carried out among GPs working in PHCCs of Qassim Province, Saudi Arabia. It started in March 2010 and was completed in June 2010. All physicians on duty were invited to participate in the study. Out of 238 invited physicians, 142 participated voluntarily in the study, leading to a response rate of 59.6%.

A pretested self-administered structured questionnaire was used for the evaluation of knowledge and practices of the studied group. The questionnaire consisted of two basic parts: part 1 included questions about the participants’ knowledge of disease cause, risk factors, prognosis, and treatment, and part 2 addressed the practical aspects of AA diagnosis, patterns of treatment and of referral.

A composite variable was created to measure the knowledge level of the participants. The variable included 17 questions (Table 1). One question asked about the cause, for which three etiologies were considered correct (unknown cause, genetic, and autoimmune), nine questions related to clinical aspects, and finally seven questions tested the participants’ misconceptions about AA. Each correct answer was given a score of 1. The total knowledge scores ranged from 0 to 17, which were categorized into high (13–17 points), moderate (9–12 points), or low (less than 9 points).

Data were analyzed using Statistical software Package for Social Sciences version 16 for Windows Inc. (Microsoft Co., Chicago, Illinois, USA). Frequencies with cross-tabulation were determined. Analyses of knowledge levels in relation to background variables were performed using the χ²-test at a minimum level of significance less than 0.05 for a two-sided test.

Results
A total of 142 GPs participated in the study with a mean (± SD) age of 42.9 ± 7.8 years. The majority were men (69.7%). With regard to work experience, 47.9% had 10 years or less of experience, 30.3% had 11–20 years, and 21.8% had more than 20 years of work experience. Most participants had a Bachelor’s degree in medicine and surgery (80.3%), and the rest were on postgraduate programs.

According to the composite knowledge variable regarding AA, 27 of 142 participants (19.01%) had a low score (Fig. 1).

Table 1 shows individual knowledge of the participants regarding different aspects of AA. With regard to the cause of AA, only 16.9% of participants reported unknown cause, whereas the majority of participants reported the cause to be autoimmune (45.8%) or genetic etiology (22.5%). Infection etiology, hormonal factors, and other causes were reported by 8.5, 2.8, and 3.5% respectively.

With regard to knowledge of the participants about the risk factors of AA, ‘importance of family history’ showed the highest rate (64.1%); however, more than one-third (35.9%) failed to recognize its importance. More than half of the participants failed to link AA to associated systemic diseases (50.7%).

Table 1 shows participants’ knowledge of the clinical aspects of the disease. Around one-fourth of participants (25.4%) responded correctly that AA is most common among those aged between 15 and 25 years, whereas the majority (73.9%) reported the age at which the disease manifests to be above 25 years. Responding to the question about the sex that is predominantly affected by AA, none of the participants correctly reported that both sexes are equally affected; the majority (68.3%) reported that male patients were more commonly affected, whereas 28.2% reported that female patients were more

![Figure 1](image-url)
commonly affected; the rest (3.5%) reported that they did not know the answer.

When asked about the area of body commonly affected by AA, 96.5% of participants reported the scalp to be the most commonly affected area, 1.4% reported the beard (face/chin) area, and only 2.1% reported that other body areas may also be affected.

Most participants were certain that AA has psychological implications (88.7%) on the affected individual/family members. The majority of participants reported good prognosis for AA (71.8%). Most participants (89.4%) were highly aware of the importance of counseling to patients with AA.

There were some uncertainties regarding the role of cosmetics/hair dyes, as only 32.4% of surveyed doctors responded that they aggravate the problem; similarly, 22.5% reported AA to be an occupation-related disease. Participants were well aware that AA is not aggravated by any type of diet, menstrual period, or use of hormonal contraceptives; those who reported a relationship was 2.1, 12.0, and 11.3%, respectively. There was some important information flaw as shown by the fact that 26.1% reported that personal hygiene has a role in prevention of AA, and 16.2% reported that AA is transmissible from person to person.

Table 2 shows the background variables associated with low knowledge score. Significant association was detected between knowledge and duration of work experience ($P = 0.013$) and between male and female participants ($P = 0.001$). Participants with longer work experience revealed significantly higher knowledge level, which was about five times more than that of the least experience group (odds ratio = 4.7). Female participants showed a significantly higher rate of low knowledge score, which was about four times that of the male group (odds ratio = 4.3).

Table 3 shows that most participants (90.8%) were certain that they could easily diagnose a case of AA. Local treatment was the most prescribed treatment reported by 85.2% of surveyed doctors, whereas 76.0% of them prescribed a systemic treatment. However, the majority did not treat AA cases independently, as most of them (84.5%) also advised a referral to a consultant dermatologist (Fig. 2).

Figure 3 illustrates the types of prescribed drugs. Corticosteroid creams/lotions for local use were the highest as reported by 45.7% of doctors, whereas minoxidil lotion was prescribed by 17.0% of them. Nearly one-fourth of the participants (22.5%) prescribed intrale- sional steroid injections. For systemic use, participants prescribed oral corticosteroid, multivitamin/mineral pre- parations, and anxiolytics/sedatives (37.3, 25.3, and 13.4% of participants, respectively).

**Discussion**

Understanding the knowledge and treatment practices of GPs working in PHCCs related to AA is one of the key measures in the evaluation of the quality of the provided services, which in turn contributes to building a baseline for continuous quality improvement. The findings of this survey suggest the existence of a satisfactory level of basic and essential knowledge among the participants. However, there were some gaps in knowledge relating to some basic issues and errors in others.

Deficient knowledge was mainly seen in the area pertaining to the importance of family history, which was reported by nearly one-third of the participants. A second area of concern was failure to correlate AA with systemic diseases as reported by about a half of the studied participants. The third was that only 25% of participants knew the peak age of occurrence. Shortage in knowledge could be attributed to less work experience, as observed in most of our participants.

Faulty knowledge of the participants was apparent in many aspects. The most common were linking AA to the use of cosmetics, the positive role of personal hygiene in disease prevention, the aggravation of AA by some occupations, and the concept of AA being a communicable disease. This error in knowledge or misconceptions could be attributed to the large debate in advertisement

**Table 2. Low knowledge score in relation to participants’ background variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Subcategories</th>
<th>Number (%) ($N=27$)</th>
<th>$\chi^2$</th>
<th>$P$</th>
<th>OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualification</td>
<td>Bachelor in Medicine and Surgery (114 )</td>
<td>20 (74.1)</td>
<td>0.81</td>
<td>0.367</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>Postgraduate (28)</td>
<td>7 (25.9)</td>
<td></td>
<td></td>
<td>–</td>
</tr>
<tr>
<td>Work experience</td>
<td>0–10 years (68)</td>
<td>19 (27.9)</td>
<td>6.14*</td>
<td>0.013</td>
<td>1*</td>
</tr>
<tr>
<td></td>
<td>11–20 years (43)</td>
<td>6 (17.6)</td>
<td></td>
<td></td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>21–30 years (31)</td>
<td>2 (6.5)</td>
<td></td>
<td></td>
<td>4.7 (1–31.0)</td>
</tr>
<tr>
<td>Sex</td>
<td>Male (98)</td>
<td>11 (11.2)</td>
<td>11.7</td>
<td>0.001</td>
<td>4.3*</td>
</tr>
<tr>
<td></td>
<td>Female (45)</td>
<td>16 (35.6)</td>
<td></td>
<td></td>
<td>–</td>
</tr>
<tr>
<td>Age</td>
<td>Less than 40 years (46)</td>
<td>10 (21.7)</td>
<td>1.58*</td>
<td>0.455</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>40 – (50)</td>
<td>11 (22.0)</td>
<td></td>
<td></td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>50 + (46)</td>
<td>6 (13.0)</td>
<td></td>
<td></td>
<td>–</td>
</tr>
</tbody>
</table>

CI, confidence interval.

*a* $\chi^2$ for linear regression.

$1^b$ Reference group.

$P<0.05$ for the null hypothesis that CI includes 1.

**Table 3. Clinical practices of the participants**

<table>
<thead>
<tr>
<th>Treatment practice</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can diagnose the disease</td>
<td>129 (90.8)</td>
</tr>
<tr>
<td>Prescribe local treatments</td>
<td>121 (89.2)</td>
</tr>
<tr>
<td>Prescribe systemic treatment</td>
<td>108 (76.0)</td>
</tr>
<tr>
<td>Referral of cases</td>
<td>120 (84.5)</td>
</tr>
</tbody>
</table>
regarding the problem of hair loss and the best way to prevent and treat, taking into consideration the fact that the world has become mostly a market place [18]. This study found that faulty knowledge could lead to mistreatment, specifically when treatment depends to a great extent on assurance and counseling. Faulty knowledge or misconceptions could be attributed to the opinions of nonmedical personnel or patients [19], which ideally should not be accepted by medical personnel as they will be reflected in the quality of healthcare services [20] and in turn in the patients’ quality of life [19,21].

With regard to the treatment lines used by the participants, multivitamins/minerals were prescribed by a large percentage of participants, and it ranked the third among the reported drugs that could be prescribed as a placebo for patients’ assurance. Potent corticosteroids were the most commonly used type of treatment, although there is little evidence that they promote hair regrowth [7]. This could be a reflection of the deficiency of physicians’ knowledge regarding updates in treatment.

**Conclusion and recommendations**

Although most participants showed good knowledge of the causes and risk factors of AA, there were some shortfalls and erroneous information in certain essential issues that could have a negative effect on the quality of management. More efforts will be needed to place our physicians on the path of continuous education and practice of an evidence-based treatment protocol for improvement of their performance.

The main limitation of this study was the use of a convenience sample, which might limit the generalization of the results.

**Acknowledgements**

The author thank all the administrators of primary healthcare in Qassim and all participants for their cooperation.

**Conflicts of interest**

There are no conflicts of interest.

**References**