

Progress and problems with acne management in the Middle East

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INTRODUCTION

Acne vulgaris is a widespread cutaneous disease throughout the world, including the nations of the Middle East.¹⁻⁵ Although epidemiologic studies of acne from the Middle East are not very common, it seems that acne occurs with a prevalence similar to that in other areas of the world.^{1,6,7} In addition, these nations are witnessing an increase in acne in adult patients³ – a finding that is also common throughout the world.⁸⁻¹⁰ Acne sequelae, including post-inflammatory hyperpigmentation (PIH) and scarring occur more frequently, posing significant management challenges for treating dermatologists.¹¹⁻¹³

Recently, the authors (Middle Eastern dermatologists) from Saudi Arabia, United Arab Emirates, Kuwait, and Lebanon with an interest and expertise in acne management – met in Dubai, United Arab Emirates to launch the Middle Eastern Acne Alliance. The group's goals are to

disseminate acne knowledge for practitioners and patients, optimize prescription behavior by providing education and recommendations, and stimulate acne research. The Middle Eastern Acne Alliance will align with the larger international group named the Global Alliance (GA) to Improve Outcomes in Acne, which has been active in enhancing acne education since 2001. This short communication summarizes the authors' anecdotal experience managing acne as clinicians and Chairs of Dermatology Departments in Middle Eastern nations.

Objectives of the Middle Eastern acne alliance

While we acknowledge that our Middle Eastern nations have uniquely individual situations that may necessitate some practice differences. We also believe that it will be useful to network with the GA and dermatologists around the world. The international GA group has been responsible

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for many significant publications and programs, including two comprehensive supplements on acne that were published in the *Journal of the American Academy of Dermatology* (Gollnick et al 2003 and Thiboutot et al 2009).^{14,15} In addition, the contributions of the GA to acne literature have been tremendous, with more than 350 journal articles and textbooks authored by members of the GA group. These initiatives have helped to educate physicians about all aspects of acne, and also to emphasize that acne is a medical condition, which is important for appropriate insurance coverage. The Middle Eastern Acne Alliance will harmonize educational messages and efforts with the overall network of the GA, which also includes regional groups in Asia, Europe, and Latin America.

Current practice patterns in the Middle East

In discussing acne treatments and protocols in the Middle East as a group, our experience is that there are some variations in both practice patterns and available treatments by country. Many Middle East nations follow the general treatment guidelines from the American Academy of Dermatology as well as the evidence-based S3 guidelines from Europe, at least at the academic level.^{16, 17} It should be noted that often countries have two separate healthcare systems – government sponsored medical care and private practice; this contributes to tremendous variations in how physicians in our region manage acne. In private practice, the patient has a more prominent role in influencing selection of acne treatment. Private practice patients are also more likely to be treated with non-medical therapies such as chemical peels and laser/light-based treatments on a cash basis.¹⁸ It is common for patients to also receive recommendations for cosmeceutical

and cosmetic products. Many private-practice patients desire oral isotretinoin therapy, and low-dose isotretinoin is sometimes used for cosmetic purposes such as to reduce seborrhea.¹⁹ However, this type of utilization does not align with international or national guidelines, and may be accompanied by potentially significant side effects for patients.

As in other regions, topical or oral antibiotic along with a retinoid has been standard of care in the Middle East (Fig 1).^{20, 21} A range of prescription products are available, including topical retinoids, benzoyl peroxide (BPO), topical antibiotics, azelaic acid, zinc, nicotinamide, tea tree oil. And, relatively recently fixed-dose combination products such as adapalene/BPO have also become available.²²⁻²⁴ Topical antibiotics are often used, but the medical community is starting to realize that these drugs should not be utilized long term due to risks for antimicrobial resistance.^{25, 26} Among systemic therapies, antibiotics (usually cycline antibiotics or azithromycin) are the most common treatments.²⁷ Oral antibiotics are often reserved for moderate to severe inflammatory acne or truncal acne, but some patients do not like to take long-term antibiotic therapy. Oral contraceptives may be used in women with polycystic ovary syndrome (PCOS) and those who desire contraception.²⁸ Antiandrogens are rarely used. In the academic setting, isotretinoin is used for moderate to severe acne, and low-dose therapy is fairly common.^{29, 30} However, there is now an alternative treatment for patients with severe acne after the first head-to-head study between oral isotretinoin and adapalene/BPO-doxycycline showed good results with the non-isotretinoin regimen.³¹

Acne is typically a chronic disease that lasts for

Acne Treatment Algorithm

	MILD	MODERATE		SEVERE	
	Comedonal	Papular/pustular	Papular/pustular	Nodular¹	Nodular²
1st Choice	Topical Retinoid	Topical Retinoid +BPO or BPO/AB, Topical Retinoid/BPO	Topical Retinoid + Oral Antibiotic +BPO or BPO/AB	Topical Retinoid + Oral Antibiotic +/- BPO or BPO/AB	Oral Isotretinoin
	Maintenance Therapy: Topical Retinoid +/- BPO or BPO/AB				
Alternatives	Salicylic acid, AHA			Oral Isotretinoin	High Dose Oral Antibiotic + Topical Retinoid + BPO or BPO/AB
Alternatives For Females			Hormonal + Topical Retinoid +/- BPO or BPO/AB	Hormonal + Topical Retinoid +/- BPO or BPO/AB	Hormonal + Oral Antibiotic + Topical Retinoid +/- BPO or BPO/AB

Adapted from Gollnick H ed. Consensus Recommendations for the Management of Acne. *J Am Acad Dermatol*.

Fig. 1 Acne treatment algorithm. Reprinted with permission from Gollnick H, et al.¹⁴

AHA = alpha hydroxyl acid, BPO = benzoyl peroxide, AB = antibiotic.

years. Topical retinoids or BPO may be used as maintenance therapy.¹⁵ To date, retinoids have been the class of therapy shown to reduce microcomedones.³² Thus, these agents have a central role in maintenance therapy.¹⁵ Microcomedones rapidly diminish during topical retinoid therapy and have a substantial rebound that occurs very soon after cessation of therapy. Studies have shown that acne remissions after active treatment can be well maintained by topical retinoids, with adapalene being the most studied, alone, or in fixed-dose combination with BPO.^{15,33} Further, adapalene therapy after isotretinoin has been shown to significantly reduce relapse rates.³⁴

CONSIDERATIONS IN MIDDLE EAST POPULATIONS

In discussion, the group noted some unique needs and opportunities to improve acne care in the

Middle East. One major issue is patient education. In Saudi Arabia, where a study of acne awareness and perceptions was recently completed, many patients have misconceptions about acne.⁷ For example, the majority (61.3%) felt that acne medications might initially worsen acne, and an additional 43% believed that spot treatment was preferable to using a topical medication on the whole face. Another 36% reported being unsure how to use their acne medications. The majority also felt that facial hygiene was a factor in acne (58.4%) along with diet (28.4%). A very large proportion of the respondents (85.6%) felt that more information about acne would be helpful.⁷ Another opportunity for improvement centers around the use of sunscreens and skin care in acne management; many acne patients in the Middle East have darker skin phototypes and may not be as attentive to sunscreen use as those

with lighter skin types. In many areas of the Middle East, including the United Arab Emirates, tolerability problems are common, in part because many patients have dry skin and dermatitis.^{2,35} In addition, early and aggressive treatment to prevent acne sequelae could help many patients. Scarring, PIH, and polycystic ovarian syndrome (PCOS) in women are more problematic and frequent in this region than in some other areas of the world.³⁶⁻³⁸

PIH is a residual discoloration of skin at the site of a previous acne lesion. While, PIH naturally fades, it may last for a prolonged period and cause distress to patients.³⁹ Patients frequently report that the hyperpigmentation is as distressing as the acne lesions, and many seek treatment to lighten discolored areas.^{39, 40} Middle Eastern women may also have melasma associated with PIH and acne.¹¹ Adalatkah et al studied 400 women, Fitzpatrick phototype 2-4, who had acne with or without melasma and reported post-acne pigmentation in 45.5% of all patients.¹¹ In addition, women with melasma were more likely to have post-acne pigmentation compared to those without (66.8% vs 24.1%, $P < .001$).¹¹ Triple combination therapy with hydroquinone, a topical retinoid, and a topical steroid is frequently used to manage PIH/melasma. Additional principles of PIH/melasma management include avoiding triggering factors (for example, excoriation), using sun protection and avoiding sun exposure, plus early diagnosis and treatment.^{41, 42}

Not all insurance providers reimburse for acne therapy, which can be problematic for patients and clinicians alike. In addition, oral isotretinoin is frequently requested by patients, but as noted above, clinicians should be relied upon to only prescribe retinoids when they are medically indicated.^{15, 43}

Antibiotic Stewardship in Acne

The group reviewed the role of *Propionibacterium* acnes in stimulating inflammation in acne, and noted that antibiotics are thought to act in acne by both antimicrobial and anti-inflammatory effects. As outlined in the European S3 acne treatment guidelines, there is medium quality evidence supporting use of oral antibiotics in acne, but negative recommendations for use of topical antibiotics as monotherapy.¹⁶ Nevertheless, prescription of both oral and topical antibiotics remains dominant in acne therapy – particularly for general practitioners (less so for dermatologists).⁴⁴⁻⁴⁷ Antimicrobial resistance is a worldwide concern, and it is important to recognize the potential impact of long-term, widespread use of oral and topical antibiotics in acne.^{25,26} Microbial resistance issues can occur both in *P. acnes* and in other more pathogenic bacterial species.²⁶

CASE STUDY

Implementing clinical guidelines in acne

Clinical guidelines in acne have been created by several dermatology groups, including the American Academy of Dermatology and the European Dermatology Forum.^{16, 17} As mentioned above, these are generally followed in Middle Eastern countries, with some adaptations. During the inaugural meeting of the Middle East Acne Alliance, there was discussion of the implementation of performance measures at the American University of Beirut (AUB) Medical Center in Lebanon. Performance measures evaluate how well clinicians are able to implement clinical guidelines, and are required for hospital accreditation and treatment of expatriate patients who are covered by

international insurance. Twelve physicians in the Department of Dermatology reviewed existing clinical guidelines, and drafted hospital guidelines for the AUB Medical Center, taking into account the options available in the Lebanese Pharmacopeia. The guidelines addressed adolescent and adult patients with active acne of different severity, as well as consequences of the disease such as scarring, post-lesional erythema, and PIH. Guidance on assessments, diagnostic tests, management plan, and education for the patients were all included. Once the guidelines were established and agreed upon, the department conducted a one-year study of implementation as a means of assessing the quality of care provided against recognized standards.

The goal of assessing care was to monitor improvement and ensure accountability. In addition, the Joint Commission International standards of accreditation for hospitals requires use of ongoing standardized processes to evaluate quality and safety of patient care. Chart review was performed to determine compliance with documentation of pregnancy state/potential of female patients receiving systemic therapy for acne. The AUB Medical Center Dermatology Department physicians adhered very well to documentation requirements, with 9/12 physicians correctly applying guidelines >85% of the time. In light of this experience, the group recommended defining and applying performance measures across the region to standardize policies and procedures while taking into account cultural norms and practice patterns.

CONCLUSIONS

Acne vulgaris is a very common disease, yet patients have a poor understanding of both its

manifestations and treatment. However, we feel there is an eagerness for education among Middle Eastern patients, who are becoming more aware that acne is a disease for which efficacious treatments are available. Clinicians should be aware of current evidence-based guidelines and expert recommendations to optimize management strategies. Treatment regimens that utilize an antimicrobial and topical retinoid remain the first-line choice, supported by strong efficacy and safety data in a variety of populations including those from the Middle East. Appropriate use of isotretinoin should be encouraged, and patients need to be aware of this important drug's benefit/risk profile to minimize inappropriate use. We hope that by forming the Middle East Acne Alliance we can work with our colleagues to disseminate latest information about acne management as well as useful strategies for educating and empowering patients.

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