

Updated Swiss Practice Recommendations for the Treatment of Acne

Expert Consensus Statement of the Working Group Acne on behalf of the Swiss Society of Dermatology and Venerology

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Abstract: Acne is one of the most common skin diseases. It has a high impact on the quality of life of the affected patients. It is now recognized that in some patients, acne shows characteristics of a chronic disease. Because of a lack of current recommendations/guidelines in Switzerland, a group of hospital and private practice based dermatologists, specialized in acne, as well as an experienced general practitioner revised the available literature on acne and its treatment. The group subsequently developed several consensus statements regarding grading, treatment and monitoring of acne. The first version of the recommendations was published in 2020 and is now being updated. The experts agreed that acne severity should be determined by a subjective method and that, for short-term therapy, treatment success is defined as an approximately 50 % reduction of inflammatory lesions within 3 months. The choice of induction treatment is based on the severity of the disease. Its main component is a topical retinoid alone or – in more severe case – in combination with benzoyl peroxide (BPO). Only in moderate to severe forms of acne or if a more rapid resolution of inflammatory lesions is desired, a systemic antibiotic should be added to induction treatment. For severe acne with a tendency to scarring, systemic retinoids are the induction treatment of choice in the absence of contra-indications. Maintenance therapy is indicated in all patients with acne, independent of disease severity. The choice of maintenance therapy should always be based on acne severity, duration of disease, current treatment and history of relapse. The preferred options for maintenance therapy are topical retinoids with/without BPO. While treating acne, a special focus should lie on the prevention of scars. For this reason, patients should be evaluated 3 months after treatment initiation to determine whether they have responded or whether further therapeutic options should be considered. The expert group also recommends counselling patients on nutrition, psychological aspects, stress, use of contraceptives, skin care, use of cosmetics and use of other drugs (like steroids). Monitoring of patients with acne should particularly focus on adherence to treatment and quality of life. Patients with severe forms of acne (acne with a tendency of scarring, patients with acne conglobata or acne fulminans), patients with insufficient treatment response after 3 months and patients with frequent relapses should be referred to a dermatologist.

Keywords: Acne, Swiss Treatment Recommendations, Acne Severity, Induction Therapy, Maintenance Therapy

Aktualisierte Schweizer Praxisempfehlungen für die Behandlung von Akne

Zusammenfassung: Akne ist eine der häufigsten Hautkrankheiten und hat einen erheblichen Einfluss auf die Lebensqualität der betroffenen Patienten. Mittlerweile wird erkannt, dass Akne bei einigen Patienten Merkmale einer chronischen Erkrankung aufweist. Aufgrund fehlender aktueller Empfehlungen oder Leitlinien in der Schweiz hat eine Gruppe von Dermatologen aus Klinik und Praxis, die auf Akne spezialisiert sind, sowie ein erfahrener Hausarzt die verfügbare Literatur zu Akne und ihrer Behandlung überprüft. Anschliessend entwickelte die Gruppe mehrere Konsens-Aussagen zur Einstufung, Behandlung und Überwachung von Akne. Die erste Version der Empfehlungen wurde 2020 veröffentlicht und wird nun aktualisiert. Die Experten einigten sich darauf, dass der Schweregrad der Akne anhand einer subjektiven Methode bestimmt werden sollte und dass ein Behandlungserfolg bei einer Kurzzeittherapie als eine etwa 50 %ige Reduktion der entzündlichen Läsionen innerhalb von drei Monaten definiert wird. Die Wahl der Initialtherapie richtet sich nach der Schwere der Erkrankung. Ihr Hauptbestandteil ist ein topisches Retinoid – entweder allein oder, in schwereren Fällen, in Kombination mit Benzoylperoxid (BPO). Nur bei mittelschwerer bis schwerer Akne oder wenn eine schnellere Rückbildung der entzündlichen Läsionen gewünscht wird, sollte ein systemisches Antibiotikum zur Initialtherapie hinzugefügt werden. Bei schwerer Akne mit Neigung zur Narbenbildung sind systemische Retinoide die bevorzugte Induktionstherapie, sofern keine Kontraindikationen vorliegen. Eine Erhaltungstherapie ist bei allen Patienten mit Akne unabhängig vom Schweregrad der Erkrankung angezeigt. Die Wahl der Erhaltungstherapie sollte stets auf der Grundlage des Schweregrads der Akne, der Krankheitsdauer,

der aktuellen Behandlung und der Rückfallgeschichte erfolgen. Die bevorzugten Optionen für die Erhaltungstherapie sind topische Retinoide mit oder ohne BPO. Bei der Behandlung von Akne sollte besonderes Augenmerk auf die Vermeidung von Narben gelegt werden. Daher sollten Patienten drei Monate nach Beginn der Behandlung evaluiert werden, um festzustellen, ob sie angesprochen haben oder ob weitere therapeutische Optionen in Betracht gezogen werden sollten. Die Expertengruppe empfiehlt ausserdem, Patienten hinsichtlich Ernährung, psychologischer Aspekte, Stress, Anwendung von Verhütungsmitteln, Hautpflege, Kosmetika und der Verwendung anderer Medikamente (wie Steroide) zu beraten. Die Überwachung von Akne-Patienten sollte sich insbesondere auf die Therapietreue und die Lebensqualität konzentrieren. Patienten mit schweren Akneformen (Akne mit Neigung zur Narbenbildung, Patienten mit Akne conglobata oder Akne fulminans), Patienten mit unzureichendem Ansprechen auf die Behandlung nach drei Monaten sowie Patienten mit häufigen Rückfällen sollten an einen Dermatologen überwiesen werden.

Schlüsselwörter: Akne, Schweizer Behandlungsempfehlungen, Schweregrad der Akne, Induktionstherapie, Erhaltungstherapie

Introduction

Incidence and burden of acne

Acne is one of the most common skin diseases seen in everyday practice. About 75 % to 90 % of adolescents show some acne lesions and the disease is often persisting into adulthood (1, 2). Acne is not a disease of the modern age. Already in 1931, a Swiss study found a prevalence of acne of 88 to 99 % in young men and of 88 to 97 % in young women (3).

Acne is often judged as a natural part of growing up, as a simple and self-limiting disease. However, it is now recognized that in some patients, acne shows characteristics that generally can be found in chronic diseases, such as a prolonged course, a pattern of recurrence or relapse, and a manifestation in acute episodes or in outbreaks with slow onset (4). An update from the global burden of disease study 2013, published in 2017, found that skin conditions contributed by 1.79 % to the global burden of disease, measured in disability-adjusted life years (DALYs). Acne is ranging in second place with 0.29 % of the total burden (5). In addition, many studies have shown that acne can be a psychologically damaging condition that lasts for many years (6–11). Acne may also cause scarring, which will even aggravate the negative psychological effects and the burden of this disease (4).

About 60 % of the adolescents affected by acne have a mild form (1). These patients, in general, treat their acne by using non-prescription preparations without consulting their physician. The remaining 40 % of acne patients seek medical advice and treatment (1).

Pathophysiology of acne

Different pathophysiological factors contribute to the development of acne. There is an increased activity of the sebaceous glands with modifications in quality and quantity of sebum production (seborrhea). Alterations in the differentiation of the follicular keratinocytes lead to hyperkeratosis. Hyper-colonization with *Cutibacterium acnes* is responsible for the formation of a biofilm, triggering an immune response (12, 13).

It seems that there are many more factors involved in the development of acne than expected. Already in early acne, lesions interleukin-1-alpha and T-cells can be detected. In addition, androgens, skin lipids as well as regulatory neuropeptides are part of this multifactorial process (1, 12–15). Androgens, especially dehydroepiandrosterone sulphate, cause a proliferation of follicular keratinocytes with micro-comedo formation and hyperproliferation of sebocytes followed by an increased sebum production. Excess androgen

activity in puberty causes inflammatory processes, which are intensified by neuroendocrine regulatory mechanisms, follicular bacteria, pro-inflammatory sebaceous lipids, as well as dietary lipids and smoking. It seems that insulin resistance as well as hyperinsulinemia also play an essential role in the development of acne. Increased levels of insulin-like growth factor 1 correlate with the total number of acne and inflammatory lesions (14).

Clinical features and severity

Acne is a polymorphic chronic inflammatory skin disease (16). In most cases, it is affecting the face. But frequently the back and chest are also involved. Clinically, open and/or closed comedones as well as inflammatory lesions, including papules, pustules and nodules, can be found. Often scarring and post-inflammatory hyperpigmentation can be seen.

Rationale and objective

As many acne patients are treated by their general practitioner, there is a need for convenient, practical guidance on the management of acne. The objective of this publication is to provide an update of the Swiss recommendations published in 2020, based on a review of the current literature and expert consensus (17).

Methods

A group of hospital- and private practice-based dermatologists, specialized in acne, as well as an experienced general practitioner, have met to revise the available literature on acne and its treatment. Based on the literature and under the lead of the first author of this publication, several expert statements – for example, regarding grading of disease severity, treatment goals and treatment options – have been developed. Then, in a multi-step approach using the Delphi method, the whole group of experts has reviewed and revised the different statements until at least 80 % of the experts agreed to them (18). These statements (marked in italics) will be presented hereafter.

Practice recommendations on acne management

Determination of acne severity

Acne severity should be determined by a physician's subjective method that assesses which lesions are predominant. In most of the cases, the subjective method is sufficient. To describe the treatment of acne based on the subjective method, the following classification was used in these recommendations: (1) mild, (2) mild to moderate, (3) moderate to severe, and (4) severe acne. Subjective assessment of severity is generally not very reliable because of high inter- and intra-rater discrepancies. However, its reliability can be improved using a picture-based support.

Definition of treatment success

There was consensus in the expert group that short-term treatment success is defined as more than approximately 50 % reduction of inflammatory lesions within 3 months. Resolution of non-inflammatory lesions may take longer. The long-term therapeutic goal for most patients is a "clear or almost clear" skin (clear = no lesions, almost clear = hardly visible from a social distance, a few comedones and papules). The time necessary to reach this goal depends on many factors. A major factor is the acne severity before treatment. As treatment success in acne can vary, therapeutic goals must be discussed with the patient. Patient satisfaction should be one of the main factors to determine treatment success.

Induction therapy

Induction therapy in mild acne

In mild acne, topical retinoids with low irritation potential (e.g. adapalene 0.1 %) should be used as induction therapy (16). Topical retinoids are the preferred substance because of their ability to suppress the formation of new microcomedones. They should be applied on the entire affected area, not on single lesions. In mild acne with predominantly papulopustular or inflammatory lesions, benzoyl peroxide (BPO) can also be considered as induction therapy. Azelaic acid can be considered as 2nd line topical therapy, e.g. for patients suffering from skin irritation, during pregnancy or if pregnancy is planned.

Induction therapy in mild to moderate acne

Induction therapy in mild to moderate acne should be performed either with a combination therapy OR with topical retinoid alone, switching to combination after 6–12 weeks, depending on the treatment success (16). The preferred treatment strategy is the combination of retinoid/BPO. If irritation is a problem, retinoid-BPO can be used intermittently, every other day, or a combination of tretinoin with clindamycin can be used. If there is a predominance of papulopustular acne, initiation with BPO/clindamycin or tretinoin/clindamycin is an option.

Induction therapy in moderate to severe acne

A combination of high-dose topical retinoid (e.g. adapalene 0.3 %) with BPO might be used for induction therapy in moderate to severe acne (19–21). In case of irritation, an alternative treatment should be offered, for example, the combination of tretinoin with clindamycin or BPO/clindamycin. The addition of a systemic antibiotic to a topical retinoid and BPO can be considered, e.g. if a patient wants

fast symptom relief, if many inflammatory lesions are present, and to avoid scarring. This might also improve compliance with treatment.

Induction therapy in severe acne

Systemic isotretinoin is the current gold standard for induction therapy in severe acne, except in case of contraindications (16). Further indications for an induction therapy with isotretinoin are an early tendency for scarring, previous topical treatments with insufficient response, or a severe psychological burden due to the acne (22).

Isotretinoin dosage and treatment duration

The isotretinoin dosage should be titrated. After starting low, the aim should be to reach a daily dose of systemic isotretinoin of at least 0.5 mg/kg body weight or the highest tolerated dose. The target total dose of isotretinoin should be 120–150 mg/kg body weight, but may vary, based on acne severity. Patients should be treated until the skin is "clear or almost clear". If the treatment goal is reached, therapy with isotretinoin should be continued for another 2 to 3 months without tapering, and then maintenance treatment should be initiated.

Recently, randomized controlled comparative studies revealed that low-dose regimens of oral isotretinoin (0.1–0.3 mg/kg body weight) were preferable in all types of acne due to its similar efficacy to conventional doses, but with fewer occurrences of clinical and laboratory side effects as well as a better patient satisfaction and compliance (23, 24). To note, studies with a continuous low-dose regimen had better efficacy in comparison to other regimens (intermittent or pulsed) of low-dose treatment (23, 25). In addition, starting at a low dose may prevent an acute inflammatory flare of acne, which can usually occur 3–5 weeks after beginning treatment, and also prevent scarring (26). However, a systematic review with meta-analysis of the literature showed that a dosage > 0.5 mg/kg body weight improves the probability of preventing relapse compared to low doses, although randomized trials focused on this topic are lacking (27).

Due to its side effects profile and to improve patient adherence, isotretinoin should only be administered by dermatologists and specialists with adequate experience with this treatment modality.

Contraindications as well as regular clinical and laboratory follow-up have to be strictly observed, and pregnancy prevention is of utmost importance (for more details, see chapter "Practice recommendations for monitoring" as well as www.swissmedicinfo.ch).

Isotretinoin co-medications

Two randomised studies showed a faster and more effective response to treatment with isotretinoin if antihistamines were administered concomitantly (28, 29).

The muco-cutaneous side effects of isotretinoin can be reduced by concomitant administration of omega-3 fatty acids (1 g / day) (30).

Alternatives to isotretinoin

In case of contraindications to isotretinoin, or based on patients' preference systemic antibiotics in combination with

a topical retinoid plus BPO may be considered as second line treatment option in patients with severe acne.

For women with signs of hyperandrogenism, with SAHA syndrome, with adult acne as sign of peripheral hyperandrogenism, or with acne and an additional wish for contraception, a systemic treatment with antiandrogenic compounds may be considered. Contraceptives with antiandrogen activity and spironolactone in a dose of 50 to 100 mg/d (no contraceptive method required) are options. A recent clinical study, conducted in 133 adult women with moderate acne, showed, for the first time, that treatment with 150 mg spironolactone per day for 6 months is significantly more effective than 100 mg doxycycline per day for 3 months, and very well tolerated (31). Antiandrogenic drugs are not considered a first-line treatment in women with uncomplicated acne vulgaris, as flares upon discontinuation are not uncommon. They are contraindicated in men.

Another alternative to isotretinoin is dapsone (50–75 mg/day, not approved in Switzerland). Before treatment start, glucose-6-phosphat-dehydrogenase has to be checked. There is also an off-label topical formulation of dapsone available.

Use of antibiotics in induction therapy

Both topical and systemic antibiotics should only be used in combination with topical retinoids and/or BPO. If systemic antibiotics are used, doxycycline and lymecycline (which is less phototoxic) should be preferred over minocycline for the treatment of moderate to severe acne (32, 33). Although minocycline has shown good efficacy in the treatment of moderate to severe acne, it may cause severe drug reactions, and the risk-benefit profile must be assessed. In addition, a twice-daily administration regimen might affect patient's compliance (34–36). Due to those reasons, minocycline is not considered as a first choice for acne treatment.

Maintenance therapy

Indication for maintenance therapy

Maintenance therapy is recommended in all patients, regardless of acne severity (19, 37). There was consensus in the expert group that when the long-term treatment goal “clear or almost clear” is achieved, a switch to maintenance therapy is recommended.

Choice of maintenance therapy

There was consensus in the expert group that the choice of maintenance therapy should always be based on severity of illness, duration of illness, current treatment and history of relapse.

In maintenance therapy, the use of a topical retinoid with/without BPO is recommended. Retinoids have a unique mode of action, reducing formation of acne precursor lesions (microcomedones) and limiting development of new lesions (19, 38). Retinoids maintain skin clearance and may prevent scar formation (39, 40). After successful treatment of moderate to severe acne, the preferred maintenance therapy is the combination of a retinoid with BPO (19). If a high dose of topical retinoid/BPO was used dur-

ing induction therapy, a switch to a lower dose of topical retinoid/BPO or a retinoid alone can be considered for maintenance treatment.

The therapy regimen chosen can be applied daily or every other day. Azelaic acid is a good alternative for maintenance treatment. Combinations used for topical maintenance therapy should not contain any antibiotics, due to the potential risk of antibiotic resistance. In more complicated cases (e.g. for patients treated with oral isotretinoin), the choice of maintenance therapy may differ. Therefore, these cases should be managed by a specialist.

Duration of maintenance therapy

The experts group agreed that maintenance therapy should generally be continued for at least 6 months, and if necessary (e.g. in case of previous severe acne or some flares during maintenance therapy) up to 12 months or longer (16). (Tab. 1) provides an overview of treatment recommendations for Acne.

Treatment of truncal acne

For the treatment of mild forms of truncal acne, a topical retinoid or azelaic acid is recommended. In daily practice, the use of a BPO washing lotion has proven to be useful for its ease of application. For moderate truncal acne, trifarotene, the only topical option specifically approved for the treatment of truncal acne, can be used as well as topical combinations (adapalene/BPO). For severe truncal acne, systemic treatment is recommended (oral isotretinoin or tetracycline plus trifarotene).

Approximately 50 % of patients with facial acne also have lesions on the trunk (back and/or chest) (41). Often these lesions are not mentioned during a consultation. In a pilot study, azelaic acid 15 % foam was also found to be effective in treating moderate truncal acne (42). A small study with 15 patients found photodynamic therapy with topical 5 % 5-aminolevulinic acid to be effective in the treatment of truncal acne (43).

Treatment of adult acne

Mild cases of adult acne should be treated with a topical retinoid or BPO as monotherapy or in combination (also with topical antibiotics), with azelaic acid (allowed in pregnancy) and non-comedogenic skin care products. In persistent cases, low-dose oral isotretinoin, occasionally spironolactone/antiandrogens (only in female patients), are recommended (31, 44–45). To reduce the risk of relapses, prolonged therapies (> 6 months) are often required.

Acne in patients > 25 of age is called adult acne (45). If it starts in the adolescence period and continues, it is called “persistent acne” while if it develops for the first time after the age of 25 it is called “late-onset” acne. Adult acne is more commonly observed in females (45). The aetiopathogenesis involves genetic predisposition, chronic activation of the innate immune system, hormonal disorders (hyperandrogenism/insulin resistance) and external factors such as stress, Western-type diet, use of tobacco and cosmetics (45). Therefore, in cases of adult acne, the presence of polycystic ovary syndrome (PCOS) and hormonal imbalance should be ruled out.

Overview of treatment recommendations for the induction and maintenance therapy of acne

Category	Mild acne (Leeds face 1–3)	Mild to moderate acne (Leeds face 4–7)	Moderate to severe acne (Leeds face 8–10)	Severe acne (Leeds face 11–12)
Induction Therapy 1st choice	Topical retinoid or BPO (to be considered when predominantly papulopustular or inflammatory lesions)	Topical retinoid + BPO or Topical retinoid alone, after 3 months: Topical retinoid + BPO	High-dose topical retinoid + BPO or Topical retinoid + BPO *	Systemic isotretinoin
Alternative	Azelaic acid	If papulopustular lesions are predominant, initiation with: BPO + clindamycin or tretinoin + clindamycin	In case of irritation: tretinoin + clindamycin or BPO + clindamycin	If contraindication to isotretinoin or patient's preference: systemic antibiotics ** with retinoid + BPO
Maintenance 1st choice	Topical retinoid w or w/o BPO	Topical retinoid + BPO		
Alternative	Azelaic acid	Retinoid alone or Azelaic acid		

No antibiotics, due to the potential risk of antibiotics resistance

* Addition of systemic antibiotics to be considered

** If systemic antibiotics are used, doxycycline and lymecycline (which is less phototoxic) should be preferred over minocycline due to potential severe drug reactions.

Acne therapy during pregnancy / lactation

We recommend topical treatments as first-line therapy. BPO, erythromycin, the combination BPO/erythromycin, azelaic acid and salicylic acid 1–10 % are considered to be safe topical treatments for mild acne during pregnancy and lactation (46).

Moderate to severe acne may require systemic treatments, such as beta-lactam antibiotics (penicillin, cephalosporins) or macrolides (erythromycin) (47). For severe attacks, glucocorticoids may be indicated from the 2nd trimester onwards (48). Additionally, laser and light therapies (blue light, photodynamic therapy) may be considered as monotherapy or in combination with topical and systemic treatments (49, 50).

Both topical and systemic retinoids, tetracyclines (after the 15th week of pregnancy) and hormonal therapy are contra-indicated during pregnancy and lactation.

Prevention of scars

Effective treatment should include prevention of scars with early adequate treatment according to acne severity and individual tendency of scarring. Patients should be evaluated 3 months after treatment initiation to determine whether they have responded or whether further therapeutic options should be considered. It is the shared responsibility of the treating physician and the patient that acne is treated effectively to prevent acne scar formation (37, 39).

Topical as well as systemic retinoids can have a long-term effect in reducing acne scars (39, 40).

Skin care

Topical and systemic acne therapy has an irritation potential and may induce photosensitivity. It is important to discuss this issue with the patients in order to protect them from side effects and to ensure treatment compliance. It is recommended to apply topical retinoids and BPO in the evening.

Skin care should take into account patient preferences, age, acne severity, actual skin condition and concomitant drug therapy. Light formula moisturizing products (oil/water emulsion) should be preferred. Day and night skin care lotions have to be oil-free and should not contain comedogenic ingredients (e.g. paraffin). Emulsifier-free and fat-free lotions are most appropriate. Skin cleanser should be soap-free (pH 4.5 to 5.5). Depending on the situation, the use of an oil-free sun lotion may be indicated.

A periodic physical comedones removal can be considered when open and closed comedones and inflammatory lesions are present. This should be particularly considered when starting treatment with oral isotretinoin to prevent flare up during the first weeks of isotretinoin treatment.

Energy-based devices in acne

Energy-based devices (EBD) are considered first-line therapy in the management of acne scars.

EBD are becoming increasingly popular in the treatment of acne. Studies show that lasers and other light-based methods have the ability to reduce acne. Due to the positive synergistic effect, they are usually combined with drug-based acne treatment.

Depending on the clinical findings, different lasers are used. Vascular lasers are the method of choice for inflammatory acne and flat or hypertrophic erythematous acne scars. Picosecond or Qs Nd:YAG lasers are used in particular for hyperpigmented scars or post-inflammatory hyperpigmentation. Fractionated ablative and non-ablative lasers (non-AFL) are the choice for the management of atrophic acne scars (rolling scars and superficial box scars) (51).

The dogma that EBD treatment should be delayed until 6 months after discontinuation of systemic isotretinoin treatment has been revised in recent years (52–54). Several studies have found various EBD, including vascular lasers, non-AFL, and 1064-nm lasers to be safe and effective for acne and acne scarring either in combination with isotretinoin or starting within 1 month of completing isotretinoin (55–59).

Further counselling

The expert group recommends providing further counselling on nutrition, psychological aspects, stress, use of contraceptives, skin care, use of cosmetics, smoking and use of other drugs (like steroids) to the patient.

Nutrition

There are no known specific foods that would worsen acne. According to a systematic review, factors like a high glycaemic index, increased glycaemic load, and carbohydrate intake have a modest yet significant proacnegenic effect (60). Another systematic review and meta-analysis found zinc to be effective for the treatment of acne, particularly decreasing the number of inflammatory papules, when used as monotherapy or as an adjunctive treatment (61).

Practice recommendations for monitoring

Adherence

A treatment plan containing goals regarding acne severity/lesions and timelines should be agreed upon with the patient (62). Also, potential side effects should be explained to improve treatment adherence.

Pregnancy testing

It is the responsibility of the treating physician to ensure that a female patient of reproductive age receiving isotretinoin is not pregnant at the initiation of therapy, has understood that she must not become pregnant during therapy and up to one month after therapy, and that the patient is well aware of the risks of isotretinoin in pregnancy. This usually involves a pregnancy test at the initiation of therapy, the use of effective and reliable contraception, written information and extensive counselling at every visit. In exceptional cases, follow-up pregnancy tests and contraception during the treatment period can be omitted if there is no risk of pregnancy due to the circumstances.

Isotretinoin monitoring

In healthy patients with a normal baseline lipid panel and liver function test results, these tests should be repeated after 2 months of isotretinoin therapy. If findings are normal, no further testing may be required.

Routine complete blood cell count monitoring is not recommended. Due to the frequency of non-specific elevations in young people and the lack of therapeutic consequences, creatine kinase should not be determined routinely. Athletes should be informed that they should report if they suffer from muscle pain that differs from normal muscle soreness.

Quality of life

Quality of life is an important issue for patients with acne. It should be assessed and monitored in patients with acne,

either by informal assessment during consultation or standardized instruments such as the Dermatology Life Quality Index (DLQI).

Referral to a dermatologist/other specialists

Severe forms of acne (including acne with a tendency of scarring, patients with acne conglobata or acne fulminans) should be referred to a dermatologist (or other specialist) for an expert opinion.

Further reasons for referral are:

- Patients with insufficient response after 3 months as defined in the recommendation
- Patients with frequent relapses
- Patients with severe acne and other dermatologic/rheumatologic symptoms (syndromal acne), acne in the context of virilisation or putative hormonal disorders

Expert referral may also be beneficial for patients showing non-compliance with acne therapy or for patients who are not satisfied with the therapy.

Conclusion

Acne is a frequently occurring skin disease. In many cases it is not just a self-limiting condition of teenagers. It is now recognized that acne shows some characteristics of a chronic disease and can have a severe psychological and social impact. Therefore, early and aggressive treatment is warranted, and maintenance treatment is recommended in all patients for optimal outcomes. The treatment recommendations presented here provide guidance for the choice of treatment options in acne of variable severity.

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+ Disclosure Statement

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Key message

These treatment recommendations provide practical guidance for the choice of induction treatment and maintenance therapy of acne; furthermore, the choice of therapy should be based on acne severity, duration of disease, current treatment and history of relapse.

History

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Author Contributions

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