Hirsutism: An Evidence-Based Treatment Update

American Journal of Clinical Dermatology

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Electronic Supplementary Material 1

Eligibility criteria:

Trials included in this study were full text available articles published in the English language that enrolled women of any age with varying degrees of hirsutism based on modified Ferriman-Gallwey grading system (mFG) scores in the period between January 2012 and August 2013. The included studies involved at least 6 months of treatment and/or follow up of the study modality. All studies used a version of the mFG as an outcome measure (hair counts were acceptable for photoepilation studies). We excluded studies without an appropriate control and studies of patients with presumed congenital adrenal hyperplasia.

Search strategy and results:

A search of Medline using the Ovid database was conducted with the key word “hirsutism” including all its specific terms. The search was limited to studies in humans and articles published in English from 2012 to present. The search was further limited by using the parameter “therapy (maximize sensitivity)”. The resulting 55 references were evaluated. Reviews, case reports, and letters were eliminated resulting in 15 references that were more closely evaluated. Those that did not directly evaluate hirsutism or did not have appropriate controls were eliminated. The resulting 4 randomized controlled trials and 1 systematic review/meta-analysis were included. An additional search was carried out using PubMed with search terms “hirsutism AND (treatment OR therapy OR management)” The selections were filtered for Systematic Reviews, Practice Guideline, Meta-Analysis, Guideline, Clinical Trial, Randomized Controlled Trial, Multicenter Study, Comparative study, Evaluation Studies, Review, from January 1, 2012 to present in the English language. Forty-six articles were retrieved by the search including numerous overlaps from the initial search. An additional 4 articles were reviewed for eligibility. From those articles one additional systematic review/consensus guideline was identified and included.

An informal search of the literature for additional relevant articles outside of the date of publication constraints (2010 to 2011) was performed. Key words were ‘hirsutism’ (including all its specific terms) and “treatment”. The search was limited to adult human subjects, randomized controlled trials and articles published in English. The resulting 19 references were
evaluated. Four articles of relevance were identified. These four articles have been included in this review for completeness of appropriate therapeutic options for hirsutism and are noted on the PRISMA flowchart (see below) as references from other sources[1].

A search was also conducted to identify all prior relevant systematic reviews. Some of these studies were identified in the searches outlined above. A search was also conducted on the Cochrane Database using the term “hirsutism”. A total of 12 reviews or protocols were identified and those relevant to the treatment of hirsutism are included in Table 2. In addition, the Ovid database was searched using the key word “hirsutism” and studies were restricted to meta-analyses and systematic reviews. The resulting 58 references yielded 12 studies pertinent to treatment of hirsutism and are listed in Table 2. Many of these were also identified on prior searches listed above. An additional specific search of “hirsutism” and “laser” yielded two more systematic reviews.

Study selection:

All abstracts were reviewed by the authors and potentially eligible studies were obtained in full text. Studies meeting the above eligibility criteria with appropriate controls and follow up were included with the exception of an article comparing OCP to a combination of anti-androgen with insulin sensitizers (Pioglitazone, Metformin, Flutamide). This article was excluded, as it fell beyond the scope of combination therapies addressed in this review. The studies ultimately included in this review are: a systematic review with meta-analysis, a single systematic review with consensus statement and four randomized controlled trials (Table 3). As noted above, an additional four RCTs from 2010 and 2011 are included.

A PRISMA flowchart, detailing the identification and selection of eligible trials and reviews is included (Electronic supplementary material 2).

Quality assessment:

The authors determined the quality of the trials based on “The American College of Physician’ Guideline grading System” [2] using the criteria of randomization, blinding, number of participants, risk of bias and length of evaluation in determining a quality ranking of insufficient, low, moderate or high. In addition, this guideline was used to determine the strength of recommendation for each therapeutic modality [2]. The quality of the available studies and strength of recommendation are summarized in Table 7.