



Natural Products for Psoriasis



Monson CA*, Monson ACS and Petri V

Department of Dermatology, Brazil

*Corresponding author: Monson CA, Department of Dermatology, Brazil

Submission: 📅 October 12, 2018; Published: 📅 October 31, 2018

Mini Review

Psoriasis is a chronic inflammatory proliferative disease, with is multifactorial causes. Affects the skin and produces great damage on patient's lives. As emotional fragility can be seen in most people with, there is a constant need to search for strategies to improve the quality of life of those with this condition Raychaudhuri [1]. There is a consensus among experts that psoriasis usually does not take away the life of a person, but severely affects the quality of life [2-4]. It is unknown why psoriasis occurs, but the immune system is involved [5,6] and is associated with markers of systemic inflammation (elevated levels of C-reactive protein, and tumour necrosis factor), increasing the chances of heart disease [6].

Most people with psoriasis seek the opinion of their dermatologist about the existence of new treatments including CAMs that may provide palliative relief, especially when conventional treatments do not produce the results that meet their expectations. (CAM) is not conventional, are widely used by patients suffering from psoriasis. People spend large amounts of money each year on complementary medical interventions (CAMs) for psoriasis, while many questions concerning these therapies remain unanswered [7]. CAMs consists of groups of medical and healthcare systems, practices, and products that are often considered outside conventional medical practice, and the number of those who use these therapies has been growing steadily. Different CAMs act in different ways, beneficial or not [8,9].

The concept of what CAM means is often completely dependent upon the cultural context of different countries. The definition of CAMs includes all such practices and ideas that are outside the domain of conventional medicine in most countries and considered by its users as preventing or treating illness, or promoting health or well-being [10]. The USA's National Institutes of Health (NIH) created the National Center for Complementary and Integrative Health (NIH/NCCIH), which has determined criteria for the definition and classification of (CAMs). The term 'complementary medicine' refers only to the use of interventions in addition to conventional medicine. The term 'alternative medicine' refers to treatments used in place of conventional medicine, whereas the term 'integrative medicine' describes a combination of conventional medicine and complementary and integrative health (CAM) when there is evidence of effectiveness, efficiency, and safety. The NCCIH has divided CAM into the following categories:

- a) Natural Products
- b) Mind and Body Practices;
- c) CAM Practices with different modalities (e.g. movement therapies, traditional healers, manipulation of various energy fields, and whole medical systems such Traditional Chinese Medicine and Homeopathy) [11]. Natural Products include herbs, honey, minerals, vitamins, oils, special diets and dietetic products. CAMs are mistakenly considered to be innocuous because they are regarded as 'natural products'. However, they are complex substances with active chemical ingredients and therefore have pharmacokinetic and pharmacodynamic effects like any other drug. These effects, which may often be unknown, may turn out to be dangerous and unsafe. Although there are many publications on CAMs, important knowledge about their effectiveness, efficiency, and safety have not been fully mapped. The body of clinical trial literature surrounding the use of complementary and alternative medicine for psoriasis is large, but has several limitations [12-14].

It was made a Systematic Review according Cochrane's Handbook, and the theme was reviewed the evidence for the possible potential benefits of complementary interventions, classified according to the criteria of the National Center for Complementary and Integrative Health / NIH, which is aimed at treating chronic plaque psoriasis. We aimed to identify all relevant RCTs regardless of language or publication status (published, unpublished, in press, or in progress). Two review authors (CM and ASCM) independently screened titles and abstracts of trials from literature searches for inclusion in the review and code them as "retrieve" (eligible, potentially eligible, or unclear) or "do not retrieve". We obtained full text of those coded "retrieve", and two review authors (CM and ASCM) independently assessed the full text to identify studies for inclusion. We resolved disagreements by discussion and with a third author (VP). We recorded reasons for the exclusion of any ineligible studies. All included studies were randomised controlled trials (RCTs) evaluating the effects of Complementary Therapies category Natural Products, classified according to the National Center for Complementary and Integrative Health/National Institutes of Health, for the treatment of chronic plaque psoriasis.

Results

The results were summarized at Table 1. It was found 1425 records from the different database searches in the inclusion criteria for the present review but only three studies are related to Natural Products [15,16]. Most Natural Products studies excluded were about Alternative Therapies, not Complementary. Two studies related to natural products were parallel and single centre RCTs Choonhakarn [16]. One study was prospective-randomized, half-side comparison study with subsequent immunohistochemical assessment of biopsies. All studies compared the use of herbs with the use of conventional medicine [15]. All participants had light, moderate and heavy psoriasis with chronic conditions associated. The age varied between 21 up to 71 years old with different sets

Table 1: Results.

Study	Category	Modality	Submodality	Primary Outcome
Augustin 1999	Natural Products	Herbs	Mahonia aquifolium	Biomarkers
Choonhakarn 2010	Natural Products	Herbs	Topical Aloe vera	Clinic Pasi
Ho 2009	Natural Products	Herbs	Herbs of Chinese medicine, in capsule	Clinic Pasi

Risk of bias assessment tool [17]:

Two authors (CM and ACSM) independently assessed the risk of bias for each included trial using the criteria described in the Cochrane Handbook for Systematic Reviews of Interventions [17,18]. A third author (VP) resolved any disagreement. We assessed the risk of bias according to the following domains:

- random sequence generation (selection bias);
- allocation concealment (selection bias);
- blinding of participants and personnel (performance bias);
- blinding of outcome assessment (detection bias);
- incomplete outcome data (attrition bias);
- selective reporting (reporting bias); and
- other bias (other sources of bias related to a particular trial design, e.g. cross-over or cluster-randomised, or specific circumstances, e.g. interventions mixed) [19-22].

We classified the risk of bias as low risk of bias, high risk of bias, or unclear risk of bias.

Two studies described adequate methods for the sequence generation Choonhakarn [16] and were classified as low risk of bias, but only one of them also described adequately the allocation concealment Choonhakarn [16] with low risk of bias while the other was judged as unclear risk of bias. The other study did not provide information for judgement regarding selection bias and was classified as unclear risk of bias [15]. One study was considered as low risk of bias due to adequate blinding of both participants and personnel Choonhakarn [16] but this study did not describe blinding regarding outcome assessors and was considered as unclear risk of bias for this aspect. The other two studies were classified as unclear risk of bias to blinding of participants, personnel and outcome assessors due to lack of information Augustin [15]. Two studies did

and ethnicity. There were a total of 127 participants in the three studies. The mean of the number of participants across studies was 44. Although all three studies assessed the use of herbs as an intervention, there were a great variation of the nature of these herbs: one study used Mahonia aquifolium [15]; other used topical Aloe vera [16]; the third assessed herbs of Chinese medicine, in capsule form Ho 2009. In all cases, the comparison were related to the use of conventional medicine interventions. Two studies reported changes in disease status assessed by signs and symptoms using PASI or PGA. There were reports of adverse events although it were not described the correspondent groups related to these events. It was also reported the quality of life outcomes in two studies using different instruments (DLQI and PDI) [16].

not have significant losses that could influence the study results and were considered as low risk of bias [15,16]. One study had a high number of losses at CAM group that were not detailed and was considered as high risk of bias. Two studies described all important and relevant clinical outcomes related to the condition and were considered as low risk of bias Choonhakarn [16]. One study did not provide information about clinical outcomes and was considered as high risk of bias [15]. There were no records of research protocols or clinical trials evaluating potential selective reports. For other biases, all three studies included were considered as low risk of bias [15,16].

For effects of interventions

Two studies described the use of (PASI). There was a statistically significant difference in favour of CAM in the comparison of Aloe Vera versus conventional therapy Choonhakarn [16] up to two months after treatment (MD -1.14, 95% CI -2.13 to -0.16; 75 participants; one study). Only one study described six months time point and found statistically significant difference in favour of conventional medicine when compared to the use of herbs of traditional Chinese medicine (MD 10.30, 95% CI 3.90 to 16.70; participants = 33; study = 1). The reduction in MD is favourable for each of measure reported [23-27]. The study of Ho 2009 also reported this outcome using the (PGA) Physician's Global Assessment instrument and found statistically significant difference in favour of conventional medicine with six months of analysis (MD 3.79, 95% CI 1.88 to 5.70; 33 participants; one study). The reduction in MD is favourable for each of measure reported. One study used (SAPASI) Choonhakarn [16] and found difference in favour of natural products (MD -1.14, 95% CI -2.13 to -0.16; 75 participants; one study). The reduction in MD is favourable for each of measure reported. The only study that discriminated the number of adverse events between groups was Ho 2009, and they found no difference between the use of traditional Chinese medicine herbs and conventional medicine, (RR 0.79, 95% CI 0.42 to 1.48; 33 participants; one study). The types of adverse events were evaluated by the PASI, PGA and PDI.

Two studies described this outcome Choonhakarn [16] but using different instruments. One study Choonhakarn [16] found no difference in quality of life using (DLQI) to assess the comparison between Aloe vera and conventional medicine (MD 0.20, 95% CI -0.30 to 0.70; 75 participants; one study). The other study Ho 2009 also did not find difference between CAM and conventional medicine when using PDI with six months time point (MD 3.40, 95% CI -12.94 to 19.74; 33 participants; one study). The reduction in MD is favourable for each of measure reported [27-35].

Discussion

When considering the modality, we also observed a great variability among studies regarding the intervention assessed. Although all three studies could be classified as natural products modality and all used herbs as interventions, all of them used different types of herbs: there were Mahonia aquifolium [15]; aloe vera Choonhakarn [16]; and Chinese medicinal herbs Ho 2009, in different forms. There was conflict among studies regarding results. When considering "Changes in disease status" assessed by PASI, we found a significant result in favour of CAM in analysis up to two months (MD -1.14, 95% CI -2.13 to -0.16; 75 participants; one study) Choonhakarn [16] but a difference in favour of conventional medicine in other study analysis at six months time point (MD 10.30, 95% CI 3.90 to 16.70; 33 participants; one study). The report of adverse events was limited and not significant when described (RR 0.79, 95% CI 0.42 to 1.48; 33 participants; one study). There was an absence of reports regarding 'Changes in conventional medicine interventions assessed' but two studies Choonhakarn [16] described quality of life without find any difference between CAM and conventional medicine in two instruments (DLQI and PDI) [35-40].

There was low applicability in relation to this comparison especially due to the wide variety of natural products. The lack of standardization processes in the synthesis of active chemical principals and the wide variability of assessed substances from few studies results in limited applicability and high uncertainty regarding safety about the obtained evidence regarding natural products. We also believe that the cultural aspect acts negatively on the incorporation of this evidence. The limitations of this review are related to the possible risk of publication bias, which we tried to minimize through extensive searches in various sources of information and a broad eligibility criteria. We believe that the likelihood of missing studies is low considering the measures used to avoid this bias, but the fact that studies have not yet been incorporated may be a source of potential bias [41-43]. There was also a limitation regarding the wide cultural character of some interventions that required profound changes in lifestyle and are incompatible with global scenarios (e.g. Chinese medicine and Ayurvedic Medicine). We opted not to include studies of such interventions considering the risk to limit the applicability of evidence and the risk of combining interventions of different natures even than they are also classified as CAMs [44-46].

There was also a limitation due to the lack of information regarding safety of CAMs interventions. For Natural Products we recommend cautionary use of natural products considering the lack

of standardization processes in the synthesis of active chemicals principals and the wide variability of assessed substances from few studies results in low applicability and safety about the obtained evidence. However the component motivational for "change of life style" that is associated with CAMs approaches in general could be helpful and allows beneficial results as a strategy to elucidate participatory response of the patient in the therapeutic processes [47].

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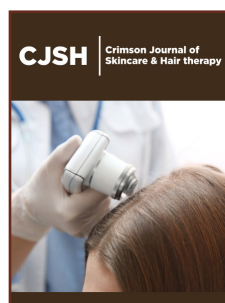
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