INTRODUCTION

Seborrheic keratoses (SK) are the most common benign epidermal tumors composed of epidermal keratinocytes (Mackie, 2004). The condition usually occurs in middle-aged individuals and can arise as early as adolescence (Mackie, 2004). Both sexes are equally affected (Mackie, 2004). The lesion of SK can occur at any site but most frequent on face and upper trunk (Mackie, 2004). The lesions are usually well-circumscribed, dull, flat, tan, or brown patches. They are usually asymptomatic but may be itchy. As they grow, they become more papular, with a "stuck on" appearance (Mackie, 2004). Sometimes SK presents with a plane flat verrucous surface which may be clinically confused with verruca plana. Verruca Plana (VP) is a common benign skin infection that is caused by human papilloma virus (HPV).
Since these two conditions have significantly different etiology, treatment and prognosis, differentiation of SK from VP is necessary. Over the last few years, several studies have shown that dermoscopy may aid in the diagnosis of various dermatological disorders. It is traditionally used for the evaluation of skin tumors and melanocytic lesions, but it can also be used for such verrucous lesions. The features observed may serve as an additional tool in the diagnosis of these lesions, and exclude the need of invasive tools like skin biopsy. In literature search we found many studies evaluating the dermoscopic features of SK and variants of SK but there are very few studies differentiating SK and VP till date. We conducted this study to evaluate the different specific patterns observed in such flat verrucous lesions and determine the use of dermoscopy in differentiating SK from VP.

MATERIALS AND METHODS

We conducted a cross-sectional single centre descriptive study. The source of the study population was patients attending outpatient department of a tertiary care centre. A total of 18 patients were included in the study. Inclusion criteria were age more than 18 years of either sex, clinically presenting with plane verrucous lesion and who were willing to participate in the study. Informed written consent was taken of all the subjects. Patients whose lesions could not be confirmed histopathologically and who failed to give consent for the same were excluded from the study. A detailed history and clinically examination was done. Clinical photographs of the lesions were taken. Dermoscopic examination of the lesions was performed using OITEZ e-scope (DP-M17 filter e-scope pro (optical 200x)). We evaluated the findings under polarized and non-polarized light with 20x and 200x magnification. Different patterns observed in the lesions were studied and categorized into data. The patterns observed were comedo like openings, fissures and ridges, milia like cysts, fingerprint pattern, vasculature like dotted vessels and hair pin vessels; while patterns at the borders of lesions studied were sharp demarcation, moth eaten border or a white surrounding halo. Comedo-like openings are ‘black head like’ plugs of brown to black color. Milialike cysts are round, whitish, or yellowish structures. Fissures are irregular linear keratin-filled depressions. Fingerprint-like structures are thin, brown, parallel lines resembling fingerprint pattern. Moth eaten border is the concave border of the SK which has been compared to Moth eaten garment. Hair pin blood vessels correspond to long capillary loops, mainly found at the border of SK. Sharp Demarcation is the abrupt cut-off of the pigmented border (Malvehy et al., 2006; Braun et al., 2002). Skin biopsy of the lesions was performed for histopathological confirmation. Descriptive analysis was used to analyse the data obtained.

RESULTS

Out of the 18 patients, on histopathology, 14 patients had seborrheic keratosis while 4 patients had verruca plana lesion. The most common dermoscopic pattern observed in seborrheic keratosis were comedo like openings (Image 1). The second commonly pattern observed was fissures and ridges which formed a brain like appearance (Image 2). Few other findings in SK lesions were milia like cysts (Image 3) and fingerprint pattern. Amongst vasculature in SK lesions hair pin vessels were seen. The frequency of these findings in SK were as in (Figure 1). Borders of most of the lesions of SK showed sharp demarcation and few showed a moth-eaten border (Figure 2).

Among the 4 patients of verruca plana, the most specific and constant finding was dotted vessels seen as black thrombosed dots (Image 4) and a surrounding white halo (Image 5) in most of the patients (Figure 3).

Figure 1. Frequency of dermoscopic patterns in SK

Figure 2. Frequency of dermoscopic patterns at borders of SK

Figure 3. Frequency of dermoscopic patterns in VP

<table>
<thead>
<tr>
<th>ON DERMOSCOPY</th>
<th>SEBORRHEIC KERATOSIS</th>
<th>VERRUCA PLAN A</th>
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<tbody>
<tr>
<td>Border</td>
<td>Sharp demarcation ++</td>
<td>Surrounding white halo</td>
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<tr>
<td>Vascular</td>
<td>Hairpin vessels (Few)</td>
<td>Dotted; thrombosed (Many)</td>
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<tr>
<td>Characteristic finding</td>
<td>Comedo like openings</td>
<td>Thrombosed vessels</td>
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Figure 4. Dermoscopic clues to differentiate SK from VP
DISCUSSION

The flat verrucous lesions morphologically have plane flat verrucous surface, a defined border and a pigmented brown to black colour, which may be seborrheic keratosis or verruca plana (Image 6). Dermatologists often have difficulty in the diagnosis of these cases. Although there is a study differentiating these two disorders using confocal laser scanning microscopy (CLSM) (Liu et al., 2010), limited availability of CLSM in most of the clinics excludes its use on daily basis. A single report of dermoscopic clues along with clinical algorithmic approach to differentiate these cases is reported. (Kim et al., 2015). However no study was conducted to evaluate the use of dermoscopic examination alone to differentiate these cases. There are only a few studies on the dermoscopy of SK. Braun et al. evaluated 203 pigmented SK (from 192 patients) and reviewed dermoscopic criteria of pigmented SK. The authors found high prevalence of classic dermoscopic criteria of SK, i.e., comedo like openings (70%) and milia like cysts (66%), in addition they suggested four other dermoscopic criteria (fissures (61%), hair pin blood vessels (63%), sharp demarcation (90%) and moth eaten border (46%)) (Braun et al., 2002). Similarly in our study we recorded these criteria in SK and found consistent findings.
Dermoscopic patterns are characteristic specific to SK and VP. From our study, there were no overlapping dermoscopic findings in both hence we could confirm the use of dermoscopy in differentiating these conditions. (Figure 4) Moreover, dermoscopy being a noninvasive, easy to use tool, we suggest its use in flat verrucous lesions obviating the need for a skin biopsy.

REFERENCES


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