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Original Research Article.

Evaluation of Accuracy of Diagnosis of Benign Skin Lesions in Hospital Practice: An Hospital Based Study

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ABSTRACT

Background: Skin biopsy is an established diagnostic procedure which connects clinical diagnostic methodology with the invisible to the unaided eye microscopic field of skin pathology. Hence; we planned the present study to evaluate and compare clinical and histopathological diagnosis.

Materials & Methods: The present retrospective study included comparative evaluation of efficacy of clinical diagnosis and histopathological diagnosis. We evaluated the files and records along with biopsy reports of 80 patients with diagnosis of benign skin lesions. Data records of only those patients were included in the present study that was diagnosed with following lesions: Melanocytic Naevi (MN), Seborrhoeic keratosis (SK), viral warts (VW) and Skin tags. Examination of the histopathological reports was done to determine the accuracy of clinical diagnosis. Data regarding the demographic and clinical details of all the patients was obtained. All the results were recorded on Microsoft excel sheet and were analyzed by SPSS software.

Results: Diagnostic accuracy of clinical diagnosis in diagnsoing MN was 88.75 percent, whereas diagnostic accuracy of SK was 90 percent. Diagnostic accuracy of clinical diagnosis for diagnosing VW and sking tags was 92.5 percent and 91.25 percent respectivley.

Conclusion: It might be unnecessary to confirm the benign skin lesions with histopathologic confirmation.

Key words: Benign, Biopsy, Skin.

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INTRODUCTION

The management of diseases requires a pertinent diagnosis, which in many occasions constitutes an intricate process. Skin biopsy is an established diagnostic procedure which connects clinical diagnostic methodology with the invisible to the unaided eye microscopic field of skin pathology.[1-3] Taking under consideration the potentials and limitations of optical microscopy and the indications of performing an invasive technique, physicians often rely on biopsy for enhancing their diagnostic abilities.[4,5] Most general practitioners who excise biopsy specimens are not trained pathologists, and even the most "obvious" clinical lesion may not turn out to be what it was thought to be. This happens even to experienced specialist surgeons.[6,7] A policy of selective histological referral when the doctor is not necessarily an expert clinician will certainly miss important diagnoses, but it also misses the basic point that these specimens are diagnostic and, once lost, can never be retrieved.[8] Hence; we planned the present study to evaluate and compare clinical and histopathological diagnosis.

MATERIALS & METHODS

The present retrospective study was planned in the department of dermatology of Venereology & Leprosy, Government S.K. Hospital, Sikar, Rajasthan, and included comparative evaluation of efficacy of clinical diagnosis and histopathological diagnosis. We evaluated the files and records along with biopsy reports of 80 patients with diagnosis of benign skin lesions. Data records of only those patients were included in the present study that was diagnosed with following lesions.

- Melanocytic Naevi (MN),
- Seborrhoeic keratosis (SK),
- Viral warts (VW) and
- Skin tags.

A total of 80 cases were included which comprised of 20 cases each of MN, SK, VW and skin tags. Examination of the histopathological reports was done to determine the accuracy of clinical diagnosis. Data regarding the demographic and clinical details of all the patients was obtained.

Statistical analysis

All the results were recorded on Microsoft excel sheet and were analyzed by SPSS software. Univariate regression curve was sued for assessment of level off significance. P- value of less than 0.05 was taken as significant.

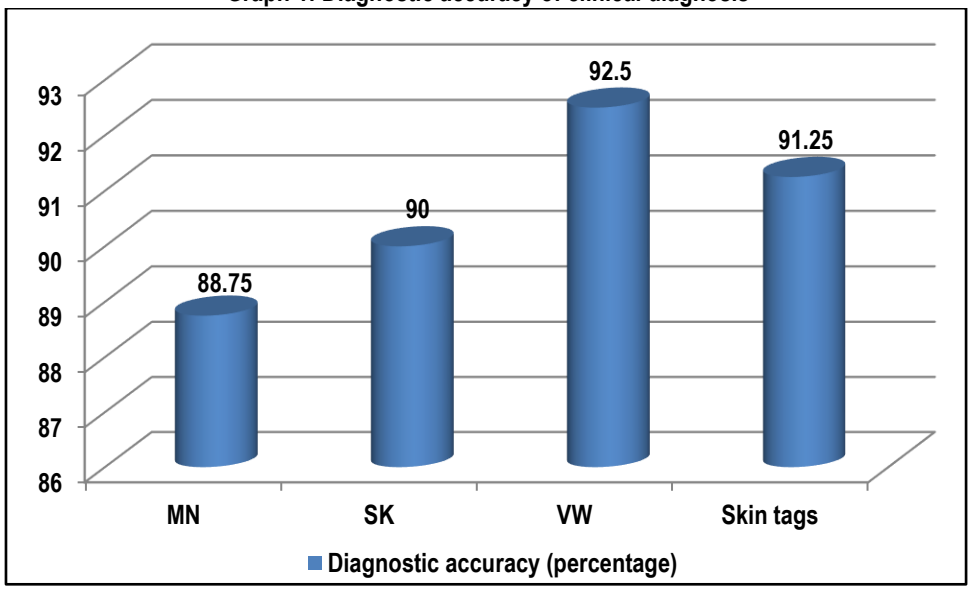
Table 1: Demographic data record of 80 patients

Parameter		Value
Mean age (years)		48.1
Gender	Males	52
	Females	28

Table 2: Histologic findings in 80 skin lesions with being clinical diagnosis

Histologic diagnosis	Clinical diagnosis (No. of cases)			
	MN	SK	VW	Skin tags
Seborrhoeic keratosis	3	72	1	1
Melanocytic naevus	71	1	2	1
Viral wart	2	2	74	1
Skin tag	1	1	0	73
Basal cell carcinoma	1	1	0	3
Squamous cell carcinoma	0	1	0	1
Xanthoma	1	0	2	0
Blue naevus	1	1	1	0
Others	0	1	0	0

Graph 1: Diagnostic accuracy of clinical diagnosis



RESULTS

In the present study, we evaluated the data records of a total of 80 patients, out of which, 52 were males and the remaining were females. Mean age of the patients of the present study was 48.1 years. Diagnostic accuracy of clinical diagnosis in diagnosing MN was 88.75 percent, whereas diagnostic accuracy of SK was 90 percent. Diagnostic accuracy of clinical diagnosis for diagnosing VW and skin tags was 92.5 percent and 91.25 percent respectively.

DISCUSSION

In the present study, we observed that diagnostic accuracy of clinical diagnosis in diagnosing benign skin lesions was 90 percent. Morrison A et al compared the diagnoses of general practitioners and dermatologists over a selected period in patients with a possible diagnosis of skin cancer. Four hundred and ninety-three patients were seen by one of two dermatologists over a 1-year period at a rapid referral clinic for patients suspected by their family practitioners of having unstable or possibly malignant skin lesions; 213 of these patients had a diagnosis made on clinical examination by the dermatologist, while 264 had diagnostic or therapeutic biopsies performed; 16 patients defaulted on surgery. The diagnoses of the family practitioners agreed with the diagnoses of the dermatologists on patients diagnosed clinically in 54% of cases. Thirty-eight patients had histologically proven skin malignancy. These were diagnosed accurately by the referring family practitioner in 22% of patients, while the dermatologists made the correct diagnosis prior to biopsy in 87%. In over 50% of cases diagnosed clinically, the dermatologist and family practitioner agreed. Histologically proven skin cancers were diagnosed accurately in only 22% of cases by family practitioners, compared to 87% of cases by dermatologists. Specific areas of diagnostic difficulty for family practitioners include benign pigmented actinic and seborrheic keratoses, squamous cell carcinoma, and melanoma.[10]

Pockney P et al presented an observational study of interobserver agreement using data from a population-based randomised controlled trial of minor surgery. Trial participants comprised patients presenting in primary care and needing minor surgery in whom recruiting doctors felt to be able to offer treatment themselves or to be able to refer to a colleague in primary care. They are thus relatively unselected. The skin procedures

undertaken in the randomised controlled trial generated 491 lesions with a traceable histology report: 36 lesions (7%) from 33 individuals were malignant or pre-malignant. Chance-corrected agreement (κ) between general practitioner (GP) diagnosis of malignancy and histology was 0.45 (0.36–0.54) for lesions and 0.41 (0.32–0.51) for individuals affected with malignancy. Sensitivity of GPs for the detection of malignant lesions was 66.7% (95% confidence interval (CI), 50.3–79.8) for lesions and 63.6% (95% CI, 46.7–77.8) for individuals affected with malignancy. The safety of patients is of paramount importance and it is unsafe to leave the diagnosis and treatment of potential skin malignancy in the hands of doctors who have limited training and experience. However, the capacity to undertake all of the minor surgical demand works demanded in hospitals does not exist. If the capacity to undertake it is present in primary care, then the increased costs associated with enhanced training for general medical practitioners (GPs) must be borne.[11] Parslew RAG et al reviewed the histological findings of 1000 lesions removed between 1990 and 1992 where a firm clinical diagnosis of a benign melanocytic naevus (MN; n = 250), seborrhoeic keratosis (SK; n = 250), viral wart (VW; n = 250) or skin tag (n = 250) had been made. Next, we perused the original clinical diagnosis made for all histologically proven malignant melanomas (MM) between 1968 and 1993, to see whether they had been misdiagnosed as one of the above four common benign lesions. Histology confirmed the clinical diagnosis in 89% of presumed BM, 89% of presumed SK, 83% of presumed VW and 81% of presumed skin tags. Common causes of misdiagnosis were other benign lesions: 52% of incorrectly diagnosed BM were SK and 30% of incorrectly diagnosed SK were BM, while 38% of incorrectly diagnosed VW were SK. A total of seven malignant tumours (six basal cell carcinomas, one squamous cell carcinoma) were misdiagnosed clinically, one as BM, three as VW, and two as MN, but no malignant lesions were mistakenly diagnosed as skin tags. Review of 238 histologically proven malignant melanomas revealed a prior clinical diagnosis of BM in 9% and MN in 0.8%, but none were clinically misdiagnosed as skin tags or VW. Hence, in a hospital setting, a firm clinical diagnosis of a skin tag did not lead to missed malignancy, and routine histological confirmation of these lesions appears unnecessary. However, in the case of BM and MN, and where clinical doubt exists, histological review remains essential.[12]

CONCLUSION

From the above results, the authors concluded that it might be unnecessary to confirm the benign skin lesions with histopathologic confirmation. However; future studies are recommended.

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