International Journal of Science and Research (IJSR)
ISSN (Online): 2319-7064
Index Copernicus Value (2015): 78.96 | Impact Factor (2015): 6.391

Clinical Study of Candidal Manifestations

Dr. R. Sreenivasulu Naik[1], Dr. K. Balarami Reddy[2], Dr. A. Vijaya Kumari[3], M. Deepthi[4], Dr. K. Penchalaiah[5]

[1, 2, 3]Assistant Professor, Department of Dermatology, Government Medical College, Anantapuram, Andhra Pradesh, India

[4]Senior Resident, Department of Dermatology, Government Medical College, Anantapuram, Andhra Pradesh, India

[5]Associate Professor, Department of Dermatology, Government Medical College, Anantapuram, Andhra Pradesh, India

Abstract: ***Aims and objectives**: To study the prevalence of various mucocutaneous candidal manifestations and to evaluate the predisposing factors. **Materials and Methods**: 150 Patients with clinically suspected lesions of candidiasis and minor laboratory investigations. **Results**: Females were more commonly affected (63.5%) and prolonged contact with water was the commonest predisposing factor (28%). Intertrigo was the commonest clinical manifestation (36.6%). Culture examination was found to be more superior to KOH examination. **Conclusion**: Clinical presentation of candidiasis most often enables to detect the underlying predisposing factors, the prevention or treatment of which decreases the discomfort caused and chances of recurrence, thus improving the quality of life of the affected individual.*

Keywords: Candida, Predisposing factors, Clinical types, Clinical marker

1. Introduction

Mucocutaneous candidiasis is a common infection of skin, nails, oral and vaginal mucous membranes and is often associated with chronic course and frequent recurrences. If untreated, the disease course is usually unremitting. Even regular treatment doesn't provide complete cure and the chronic and recurrent disease affects the quality of life of an individual with candidal infection. Although healthy individual carry candidal species on body surface, only a few suffer from overt disease. Knowing and investigating for predisposing factors helps in better management of mucocutaneous candidiasis.

2. Materials and Methods

The present study was carried for a period of one year from December 2014 to November 2015 in the Department of Dermatology, Government general hospital, Anantapuram. A total number of 150 patients were selected randomly for the study, after obtaining their informed consent. The study population included clinically suspected cases of candidiasis with various lesions like oral thrush, vaginitis, cutaneous and nails infections.

After selection of cases and detailed history taking, the patient was examined in good light for varied manifestations of candidiasis such as discharge in genital areas, swelling and discoloration of nails and nail folds, fissuring of angles of mouth, intertriginous areas and oral cavity. Using sterile measures (70% isopropyl alcohol was used to sterilize skin and nails) samples were collected from various sites. KOH wet mount preparation for direct microscopy, Gram staining and Culture using Sabouraud's dextrose agar were done for isolating Candida species.

3. Results

Among 150 patients studied 95 (63.5%) were females and 55 (36.5%) were males. And more patients belonged to age group above 40 (35.3%).
Housewives constituted to more than half of the patients studied, (56.6%) followed by labourers(20.6%).

Intertrigo was the commonest clinical type seen in 55(36.6%), oral and vulvovaginal candidiasis constituted 34(22.6%) and 31(20.6%) patients respectively.

Table 1: Clinical Types

S. No.	Clinical Types	Total no. of cases	Percentage
1.	Intertrigo	55	36.6
2.	Oral Candidiasis	34	22.6
3.	Vulvovaginal Candidiasis	31	20.6
4.	Nail and Paronychia	20	13.3
5.	Balanoposthitis	10	6.6
	TOTAL	150	100

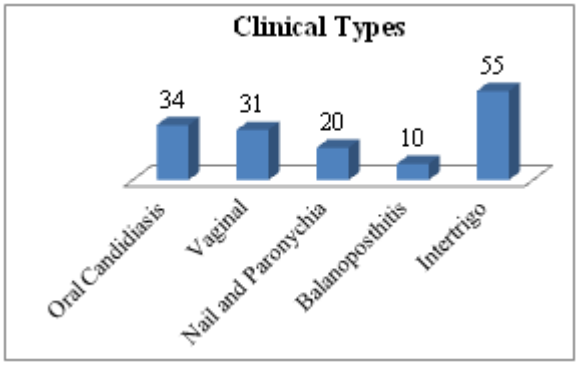

Figure 1: Graphical representation of clinical types

Figure 2: Acute intertrigo in a female child

Figure 3: Chronic intertrigo involving hand in a house wife.

Itching was the predominant presenting symptom found in 52(34.6%) patients followed by pain in toes and hands 38(25.3%) and 22(14.6%) respectively.

Prolonged contact with water was the commonest predisposing factor, found in 42(28%) patients. HIV infection and diabetes mellitus were factors responsible in 24(16%) and 18(12%) patients respectively. In 49 patients (32.6%) no predisposing factors were found.

KOH examination was positive for Candida in 68(45.4%) specimens where as it was negative in 82(54.6%) specimens. Gram stain showed positivity in 51(34%) and was negative in 99(66%) specimens. Culture yielded positive growth in 76(50.6%) specimens where as in the rest there was no growth.

4. Discussion

In the present study more than half of the patients(53.3%) belonged to the age group of 21-40 years. In a study of clinical patterns of Candidiasis infection in Bombay, Dalal& Kelkar[1]have noticed more number of patients belonging to the age group of 21-40years(35%). Clayton & Noble[2], Newnamet al[3] and Sobel et al[4] got similar findings in their respective studies.

In our study females contributed to 63.36% of patients and males formed 36.6% of patients. Meunieret al[5] and Khandari et al[6]AIIMS, New Delhi found in their studies higher incidence among females. As housewives constituted more number in the study group, the higher female incidence can be attributed to their prolonged contact with water. Rippon[7] and Sehgal & Jain[8] have also observed similar findings.

In the present study intertrigo was the commonest clinical type seen in 55(36.6%) patients. Oral candidiasis and vulvovaginal candidiasis (VVC) were seen in 34(22.6%) and 31(20.6%) and balanoposthitis was seen in 10(6.6%) patients. Daltidar et al[9], in their study of 295 patients found intertrigo in 29.2%, VVC in 26.4%, nail involvement in 25.9% and oral thrush in 12% of patients.

In the current study prolonged contact with water was the main predisposing factor found on 42(28%) patients. HIV infection and Diabetes were the next common factors in 24(16%) and 18(12%) patients respectively. Steroid therapy, pregnancy, hyperhidrosis, prolonged use of antibiotics, internal malignancy and methotrexate therapy were other predisposing factors seen in all together in 15(10%) patients. In 49(32.6%) predisposing factors were nil to trace. Rippon[7]and Hay & Moore[10]had found frequent immersion in water as the major predisposing factor.

In a study by Klein et al[11], oral candidiasis was seen in 59% of HIV patients where as Martin and Kobayashi[12]observed that 50% of HIV infected and 90% of AIDS patients to be having oral candidiasis.

Montes[13], Macneill & Garey[14], Mahapatra[15], Rippon[7] and Klein et al[11] have found diabetes mellitus as one of the common predisposing factors for candidiasis of various types which is also seen in the present study. Mahapatra[15] and Lynch et al[16] have observed candidiasis frequently in persons on oral steroid therapy.

Seelig[17], Macneill& Garey[14] and Sobel et al[4] have observed the use of antibiotics as predisposing factor for candidiasis in their studies.

Mahapatra[14], Seelig[6] and Hay & Moore[10] have observed internal malignancy and immunosuppressive drugs to be one of the predisposing factors.

Thus the various predisposing factors depicted in present study were also observed by many authors. Culture was the most reliable diagnostic tool yielding positive results in 76(50.66%) patients.

5. Conclusion

Candidiasis affecting the skin and mucous membranes was the most common manifestation seen in the current study. It was more often found to be associated with one or more predisposing factors. Prolonged immersion in water was the major predisposing factor followed by HIV infection and diabetes mellitus. In some individuals oral candidiasis was agood clinical marker in suspecting underlying HIV infection. The clinical presentation of candidiasis most often enables to detect the underlying probable predisposing factors/disease, the prevention or treatment of which decreases the discomfort caused by the condition and provides better quality of life.

References

[1] Dalal PJ, Kelkar SS. Clinical patterns of Candida infections in Bombay.Indian J DermatolVenereolLeprol. 1980; 46 (1): 31-32.
[2] Clayton YM, Noble WC. Observations on the epidemiology of Candida albicans.J Clin Path.1966;19:76-78.
[3] Newman SL, Flanigan TP, Alvan Fischer, Rinaldi MG, Michael Stein and Kevin Vigilante. Clinically significant mucosal Candidiasis resistant to fluconazole treatment in patients with AIDS.Clin Infect Dis. 1994;19:584-686.
[4] Sobel JD, Faro S, Force RW, Foxman B, Ledger WJ,Nyirjesy PR, Reed BD and Summers PR. Vulvovaginal Candidiasis: Epidemologic, diagnostic, and therapeutic considerations. Am J Obstet Gynecol. 1988;178:203-211.
[5] Meunier F, Aoun M, BitarN. Candidemia in immunocompromised patients. Clin Infect Dis. 1992;14(Sup-1):S120-5.
[6] Jagdish C. Textbook of Mycology. 2nded. New Delhi: Mehta; 2002.p.212-233.
[7] Rippon JW. Candidiasis and pathogenic yeasts. In: Medical mycology. 3rd ed. Philadelphia: W.B. Saunders Company; 1988.p.532-581.
[8] Sehgal VN, Jain S. Onychomycosis: Clinical perspective. Int J Dermtol. 2000;39:241-249.
[9] Dastidar SO, Desai SC, Purendare MD. Candidiasis in Bombay. J Post Med. 1966;12:187.
[10] Hay RJ Moore M. Mycology. In: Champion RH, Burton JL, Burns, Da, Breathnach SM, editors. Rook Wilkinson Ebling textbook of dermatology.6th ed. Vol-2.Oxford: Blackwell Science Ltd.; 1988.p.1277-1376.
[11] Klein RS, Harris CA, Small CB, Bernice Moli, Martin Lesser, and Friedland GH. Oral Candidiasis in high risk patients as the initial manifestations of the acquired immune deficiency syndrome.N Engl J Med. 1984;311: 354-8.
[12] Martin AG, Kobayashi GS. Yeast infections: Candidiasis, Pityriasis (Tinea) verscicolor. In: Freedberg IM Eisen AZ, Wolff K, Austen KF, Goldsmith LA, Katz SI, Fitzpatrick TB, editors. Fitzpatrick's dermatology in internal medicine.5th ed. Vol.2. New York: McGraw Hill; 1999.p. 2358-2371.
[13] Montes LF. Candidiasis. In: Moschella SL, Hurley HJ, editors. Textbook of dermatology. 3rd ed. Vol-1. Philadelphia: W.B. Saunders Company; 1992.p.913-923.
[14] MacNeill CC, Carey JC. Recurrent vulvovaginal candidiasis.CurrWom Heal Rep. 2001;1:31-35.
[15] Mahapatra LN. Study of medical mycology in India – an overview. Indian J Med Res. 1989;89:351-361.
[16] Lynch PJ, Minkin W, Smith EB. Ecology of Candida albicans in Candidiasis of groin.Arch Derm.1969;99:154-160.
[17] Seelig MS. The role of antibiotics in the pathogenesis of candida infections. Am J Med. 1966;40:887-917.