Trichomonas Tenax In Basrah, Iraq

Pages with reference to book, From 261 To 262

Nadham K. Mahdi, A.T. Al-Saeed (Department of Microbiology, College of Medicine, University of Basrah, Basrah, Iraq.)

Abstract

One hundred and forty three swabs from diseased mouths and 271 from healthy controls were examined by direct wet smear method for Trichomonas tenax. Negative swabs were cultured on suitable media. The frequency of trichomonos tenox was 8.4% and 4.1% in diseased and controls respectively. Of 23 positive samples, 14(3.3%) were positive on direct wet smear method and 9(2.1%) were positive on culture method. There were 12 males and 11 females. Highest frequency of Infection (6.7%) was found In 6-10 years age group and lowest (3.7%) in 11 -20 years group. Only 1% university students were positive (JPMA 43: 261, 1993).

Introduction

Trichomonas tenax is a non-pathogenic oral protozoan parasite of than[1]. It has a world wide distribution and may be found in upto 26% of persons with dental caries or pyorrhoea and in up to 11% of those with apparently normal healthy mouths[2]. The parasite has been isolated from the respiratory tree of three patients with chest diseases[3]. Several studies have reported its incidence in Rumania[4], United States of America[5], Italy[6], Azerbaidzhan[7] and Iraq[8]. Transmission is direct, from droplet spray from the mouth, kissing, or the use of contaminated dishes and drinking water[2]. The rates of positive cases increases with the age[8-10]. This work is the. first to be done in southern Iraq to investigate the incidence of T. tenax in relation to mouth's condition, age and sex of people.

Materials and Methods

A sterile swab was rubbed around the surface of teeth, from caries cavities and gingival crevices of 414 individuals, including 143 with diseased mouths and 271 with healthy mouths. General population (100 samples) primary school (104), secondary school (110) and university students (100) were chosen in Basrah province during a period of 3 months (Octobe r-December 1992). The collected samples were examined directly by wet saline smear preparations. The negative swab was cultured on Jirovec and Rodond's medium[11].

Results

Trichomonas tenax was found in 12(8.4%) patients with diseased mouths and in 11 (4.1%) with healthy mouths. The frequency of the pathogen was 6.7% in primary school children, 3.6% in secondary school children, 1% in university students and 11% in general population. The frequency of T. tenax was noticed in a substantial level up to age 3 1-40 years (Table).

Table. T. tenax in relation to age.

Age (years)	No. examined	No. positive	% positive
6-10	104	7	6.7
11-20	135	5	3.7
21-30	132	8	6.1
31-40	20	1	5.0
41-50	10	0	0.0
51-60	5	0	0.0

Sex distribution in sample size and positivity was 1:1. Out of 23 positive cases, T. tenax was observed in 14 (6.8%) direct wet smear method and in 9 by culture method.

Discussion

This study showed that T. tenax was relatively a common protozoan parasite among patients with diseased mouths. Higher incidence were reported from other parts of the world such as Rumania (20-48%)[4]. United States of America (16 to over 3Ø%)[5], Italy (40%)[6], Iraq (6-14%)[8], Hungary (38.3%)[12] and Malaysia (32%)[12]. There is a substantial rate of incidence up to age 31-40 years. Peaks of infection (6.7% and 6.1%) were seen in patients of 6-10 years and 21-30 years of age respectively. Similar findings with higher incidence rates have been reported elsewhere[4,6,8-10]. it is generally stated that the incidence rates increase with the age; however, our results can be attributed to the better degree of oral hygiene, tooth brushing and proper restorations of decayed teeth and periodental problems in our patients. Trichomonas tenax is capable of invading the unusual oral sites when conditions in these sites become favourable for its survival and multiplication[13]. In addition, the decrease or absence of T. tenax in older people may be related to the unfavourable conditions for its existence in toothless mouths[14]. Both sexes showed approximately equal incidence of T. tenax. This result is in agreement with some workers[6,8], but different from others[15].

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