Detection of enteric parasites in HIV positive patients with diarrhea

Sir,

Opportunistic parasitic infections are the sole hallmark of HIV infection and is encountered in 90% of AIDS patients in the developing countries. Cryptosporidium, Isospora, Cyclospora, and Microsporidia are increasingly being recognized as important enteric pathogens in the HIV positive patients.

A study was conducted to find out the prevalence of various enteric parasites in stool samples of HIV positive patients with and without diarrhea (100 and 40 respectively) and 10 samples from normal healthy controls. All samples were collected in clean, dry, widemouth, leakproof container and transported within two hours to the laboratory. Macroscopic and microscopic examinations of the stool samples were done. Modified Z-N staining (Hot method) was done using 10% H₂SO₄ and smears were screened under oil immersion to identify oocysts of Cryptosporidium, Isospora, and Cyclospora. Chromotrope 2R staining was done for all the samples using fast green, and smears were examined under oil immersion lens for pink coloured spores of microsporidia against green background.

Among 100 HIV positive patients with diarrhea, there were 60% adults and 40% children. Majority of the patients (73.3%) were in the age group of 21-40 years. Out of 16 microsporidia reported, liquid stool was seen in 37.5% cases, whereas abdominal pain was present in all 16 patients (100%). Out of 13 Cryptosporidium species reported, liquid stool was seen in 69.2% cases, 84.6% patients had 6-10 motions per day, and abdominal pain in 46.2% cases. Mixed parasitic infections were encountered in four patients, in two of which microsporidia and Cryptosporidium were detected together.

Among the 40 HIV positive patients without diarrhea, in one oocysts of Cryptosporidium, one cysts of Giardia lamblia, and in one ova of Ascaris lumbricoides were detected. No parasite was detected in any of the ten healthy controls.

Prevalence of enteric parasites in this study was 39%. This study was exactly similar to the study by Kumar et al. Prevalence of microsporidia in HIV positive patients with diarrhea have been reported to be in the range of 1-29% by various authors. Therefore, this study has a high prevalence of microsporidia (41%) and all these patients presented with abdominal pain. Other studies have reported mixed infections with enteric parasites as also reported by us.

One Cryptosporidium was detected in a HIV positive patient without diarrhea. Mohandas et al. have reported cryptosporidium in 10.8% HIV infected patients, out of which 7.7% patients did not have diarrhea. No microsporidia was detected in this group which is statistically significant (P < 0.05) compared to HIV positive patients with diarrhea.

Therefore, opportunistic intestinal parasites are a common cause of diarrhea in HIV infected patients, and diarrhea due to microsporidia is on the rise, as evident in this study. Chromotrope 2R staining still remains the most commonly used method for detection of microsporidial spores. Therefore, apart from modified Z-N staining for detecting

### Table 1: Parasites isolated from stool samples by wet mount, Z-N staining and Chromotrope 2R staining in HIV positive patients with diarrhea

| Parasites     | Adults | Children | Total |
|---------------|--------|----------|-------|
| Microsporidia | 11 (68.7) | 05 (31.3) | 16 (41) |
| Cryptosporidium | 09 (69.2) | 04 (30.8) | 13 (33.3) |
| Isospora      | 04 (100) | –         | 04 (10.3) |
| Cyclospora    | 01 (100) | –         | 01 (2.6) |
| Giardia       | 02 (66.7) | 01 (33.3) | 03 (7.7) |
| Strongyloides | 02 (100) | –         | 02 (5.1) |
| Total         | 29 (74.4) | 10 (25.6) | 39 (100) |

Figures in parentheses are in percentage.
Treatment of balanitis of Zoon’s with tacrolimus

Sir,

Balanitis of Zoon’s (BZ) is a frequent diagnosis in mature men and lesions are generally localized on the glans but may involve the prepuce. The etiology and pathogenesis remain unknown. However, Weyers et al. have suggested that BZ is a non-specific inflammatory reactive pattern that may occur as an isolated finding or complicate other skin diseases (i.e. lichen planus, contact dermatitis, psoriasis) of the glans penis or prepuce in uncircumcised men.

Histopathology is required to rule out malignancy and erythroplasia of Queyrat, and at the same time, it is quite diagnostic. Treatment modalities include topical steroids, fusidic acid, imiquimod, laser, and circumcision. Tacrolimus was the first nonsteroidal topical immunomodulator developed for treatment of atopic dermatitis. The efficacy/safety profile, lack of rebound effect and absence of tachyphylaxis are some of its attractive properties that have prompted dermatologists to prescribe it as an off-label treatment of other skin conditions.

We had a 70-year-old, married, sexually inactive, uncircumcised male, who came to us with an erythematous plaque present over the glans penis. The lesion was asymptomatic except occasional complaints of burning sensation. The lesion was present since two years during which he had been treated with diverse topical steroids, antibiotics, and antifungals without much clinical improvement. Examination revealed a shiny, erythematous plaque with a few erosions over the glans.

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