TEACHING FILE **(GRAND ROUNDS)**

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HIV AND VIRAL LOAD

Case Report: - A 9 years old HIV infected boy was referred for further management. He had been tested for HIV as his brother was HIV infected. The patient was currently asymptomatic and CD4 count was 1078 (30.5%). He was advised regular follow up. At 11 years, his CD4 count was 473 cells/cumm. At 13½ years of age, his CD4 count was 1297 cells/cumm and at 15½ years of age, his CD4 count was 804 cells/cumm but HIV viral load was 5,83,300 copies/ml. He was still asymptomatic though his weight was 31.3 kg and height was 144 cm and Tanners Stage 2 of puberty.

Should this child be started on antiretroviral therapy (ART)?

Expert's opinion: - This child though has a good CD4 count has growth failure in form of short stature and also has a high viral load. Thus, he should be started on ART as that would improve the growth. He was started on consisting of Zidovudine (AZT), Lamivudine (3TC) and Nevirapine (NVP). His height increased to 150.2 cm in next 6 months. Thus, in patients with HIV and normal CD4 count, the growth would be in an important parameter to decide regarding antiretroviral therapy. In case of growth failure and viral load more than 1,00,000 copies/ml, one may consider antiretroviral therapy.

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PNEUMONIA WITH POSITIVE TUBERCULIN TEST

Case Report: - A 2 year old girl presented with fever, cough and cold since 4 days. There was no refusal of feeds, loss of appetite. She had received 6 months of antituberculous therapy 1 year back in view of pulmonary tuberculosis (TB) in mother and a positive mantoux test of 10 x 10 mm. The child had received all routine vaccines including BCG. Diet and milestones were normal. On examination, she was well nourished

(weight = 12 kg, 50th centile, height = 80 cm) and had crepitations in right inframammary region. Other systemic examination was normal. Investigations showed right parahilar haziness on Chest X-Ray and hemoglobin of 10.4 gm/dl with WBC count of 10,400/cumm (50% polymorphs and 50% lymphocytes) with ESR of 30 mm at end of 1 hour. She was treated with IV Amoxycillin-clavulanic acid antibiotic for 5 days but fever persisted. A repeat mantoux test was 15 x 15 mm. A repeat WBC count showed 9,400/cumm (30% polymorphs and 70% lymphocytes)

Should this child be treated with antituberculous therapy?

Expert's opinion: - This child has presented with acute onset of fever with lower respiratory tract infection as well as rhinitis. Rhinitis in TB is unusual and is usually unilateral. Also TB in the lungs presents with low grade chronic fever and chronic cough. Though this child had a positive mantoux test it does not suggest active tuberculosis. The child also had a positive mantoux test 1 year ago and was treated for latent TB at that time adequately. A positive mantoux currently could suggest past TB infection, positivity due to previous BCG vaccination or even infection due to atypical mycobacteria. Thus, one cannot interpret mantoux test in this child.

If the child had aggravation of TB this time, then the child should have had failure to thrive, loss of appetite and primary progressive TB which was absent. Thus, in this child, active TB seems unlikely. The pneumonia could be due to viral, bacterial or even atypical organism. Since the child seems to have crepitations unilaterally with lymphocytic predominance and normal WBC count, an atypical organism seems to be the cause. As a result amoxicillin-clavulanic acid may not show a response. Here a macrolide group of antibiotic may be useful. This child was treated with Azithromycin for 5 days following which fever, cough and Chest X-Ray normalized.

Thus, there is no need for antituberculous therapy in this child.

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