1303 Protease Inhibitors Attenuate Adherence of Candida albicans to Acrylic Surface

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Protease inhibitors were shown to inhibit *Candida albicans* adherence to epithelial cells but not endothelial cells. Whether protease inhibitors have any effect on *C. albicans* adherence to acrylic surface is still unknown. **Objectives**: To observe the effect of protease inhibitors on *C. albicans* adherence to acrylic surface, and to compare the effect of different protease inhibitors on *C. albicans* adherence. **Methods**: *C. albicans* suspensions were pre-treated with different concentrations (0.8, 4, 20, 100 and 500 µM) of Saquinavir, Ritonavir or Indinavir for one hour. The yeast cells were then allowed to adhere on acrylic strips treated with human pooled saliva for another hour (Group A). Adherence was determined by calculating the percentage of cell area over the acrylic surface using an image analyser. Another group with *C. albicans* not pre-treated with protease inhibitors (Group B) and a control group with no protease inhibitors added (Group C) were also included. **Results**: All three protease inhibitors significantly attenuated adherence of *C. albicans* to acrylic surface. Group B showed significant reduction in adhesion compared with Group C. 50% reduction in adherence occurred at concentrations of 100 µM, 100 µM and 20 µM, for Saquinavir, Ritonavir and Indinavir, respectively. A dose dependent inhibition of adhesion were observed for all the protease inhibitors in Group A, which was significantly higher in Indinvavir than in Saquinavir and Ritonavir. However, such difference disappeared at concentration of 500 µM. **Conclusions**: Protease inhibitor had a direct effect on *C. albicans* pathogenicity; it attenuated *C. albicans* adherence to acrylic surfaces in a dose related fashion. Moreover, different protease inhibitors exhibited different degrees of inhibition.
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