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Thesis Title	***The possible role of galactomannan antigen detection in laboratory diagnosis of invasive Aspergillosis in immunocompromised patients***			
Year	**2014**			
Abstract	**This study was conducted to detect the invasive aspergillosis in immunocompromised patients with rapid diagnostic method (ELISA). This study was conducted on 50 immunocompromised patients, they were the attendants of Hematology / Oncology Department of Baghdad Teaching Hospital, pediatric oncology wards. The patients presented with fever which is not responding to antibiotics along with cough and sputum and abnormality on chest x-ray . And 11 healthy Iraqi individuals were included in this study. from March 2013 till October 2013. Sputum and serum. initially direct microscopical examination done for each sample and stained with gram stain. Sputum was immediately cultured on Sabouraud dextrose agar (SAB) and Brain heart infusion agar (BHI) labeled with same code number of that sputum. Wet preparation was down from colonies on Sabouraud dextrose agar plate or Brain heart infution agar for isolation and identification of species of growing mould. This study showed that female to male ratio among patients study group was (1.2:1) . The age of the patients ranged from from 2 to 70 years with a mean age (31.8 ± 0.8) years. For the control the age ranged from 11 to 60 years with a mean age (31.1 ± 0.1) years. The peak mean age group (10-20)**			

	years with (5.1 ± 0.1). **This study showed that 33(66%) of patients were having neutropenia which it is highly significant = 11.58 when the P value (P<0.01) , 10 (20%) of patients were having neutrophilia and 7 (14%) of patients were having normal blood film results.** **II** **This study showed that sputum culture for Aspergillus positive in 18 cases and it was negative in 17 patients, it was not done in 15 cases because some are from patients were sputum sampling was difficult to be** **obtained (pediatric), or have no sputum . And the Aspergillus species isolated from this culture showed that Aspergillus fumigatus is the most** **common species isolated from sputum culture 11 (61.1%) of positive culture results.** **The results showed high significant of AML diseases which composed 18 of 50 (36%) of patients , and most of the patients 24 of 50 (48%) of patients were on amphotericin B treatment.** **The results of the detection of galactomannan antigen detected by ELISA showed that the difference between the mean cutoff value of the** **patients and the control group was statistically significant (T = 0.135 and** **P value <0.05). In patient study group the ELISA test was positive in 39** **of 50 (78%) which it is highly significant when compared with noncancerous control group who were all negative 11 of 11 (100%) at p-value <0.001.** **Finally this study showed that (28 of 50) 56% of patients were dead because they are have invasive pulmonary aspergillosis (IPA) which is serious and potentially fatal disease that might kill the patients if any delay occurs in lab. diagnosis. So early diagnosis of invasive pulmonary** **aspergillosis may give higher cure rates.**