Objectives: This study aimed to separate virulence factors like pili, high molecular weight proteins HMW1/2 and *H. influenzae* adhesin (Hia), haemocin and colanic acid from capsulated (typeable) and uncapsulated (nontypeable) *H. influenzae* isolates .
Materials and methods: In this study, six isolates of *H. influenzae* were obtained from different clinical samples (ear, throat, sputum, eye, CSF). These isolates were obtained by PCR based method using *P6* gene primer. These samples were collected from the three main hospitals in Hilla city (AL-Hilla Surgical Teaching Hospital, Merjan Medical City and Babylon Hospital for Maternity and Paediatrics) during the period from February 2012 to June 2012. These samples were subjected to traditional bacterial identification methods in addition to presumptive identification using X and V factor tests .Furthermore, molecular method for detection and separation into typeable and nontypeable one using PCR, depending on presence or absence of capsule. Later on ,the detection of virulence factors from typeable and nontypeable *H. influenzae* isolates was done using specific primers : *hifA, hmw1, hmw2, hia.* Also, two methods were used to detect haemocin and concentration of colanic acid from these two types of *H. influenzae.*
Results: Twenty nine isolates were obtained by traditional bacteriological methods, of these , only ten isolates were obtained by presumptive identification method using X and V factors requirement method. Out of these 10 isolates , six isolates were obtained by molecular detection method. These 6 isolates underwent molecular separation into typeable and NTHi . Then the results showed that virulence factors were distributed between these types and found that HMW1 and HMW2 were present in NTHi while Hia was present in two isolates one typeable and the second NTHi besides the presence of *hifA* in 3 isolates. While haemocin was produced from one isolates and colanic acid was produced in high concentration among capsulated *H. influenzae* isolates.
Conclusion: 1-Virulence factors are important in pathogenesis of typeable and NTHi . 2-Nontypeable *H. influenzae* (NTHi) is also an important cause of invasive and severe disease like upper and lower respiratory tract diseases. 3-Haemocin is important virulence factor that is produced by only type b (Hib) *H. influenzae.* 4-Some virulence genes that are studied are found to be present in both typeable and nontypeable *H. influenzae* like *hifA* and *hia* genes while others like *hmw1* and *hmw2* are found to be present only in NTHi.