

to endocytic compartments, prevents peptide binding in the ER, and contributes to peptide editing in the MHC class II compartment<sup>(10)</sup>. Class II MHC and invariant chain expression was believed to be restricted to classical antigen-presenting cell (APC); but during inflammation, other cell types including human mucosal epithelial cells, have also been reported to express class II MHC molecules. These cells have a high-level expression of surface CD74, which is polarized to the apical surface<sup>(11)</sup>. However, in addition to its function as a chaperone molecule, CD74 was shown to have a role as an accessory signaling molecule.

Beswick *et al.*<sup>(12)</sup> studied in details binding of the *H. pylori* urease A and B subunits to class II MHC and the class II MHC-associated invariant chain CD74. Consequently, the suggestion of the role for CD74 in gastric epithelial cell interaction with *H. pylori* leading to NF- $\kappa$ B signaling results in IL-8 secretion, and that CD74 plays an important role in these events.

#### **Patients and Methods**

##### **Patients:**

A total of 64 patients (41 females and 23 males), aged between 14 and 66 years ( $34 \pm 1.7$  years), were screened for this study. Patients attended the Gastroenterology Unit at AL-Kadhimiya Teaching Hospital in Baghdad from 1st April to 1st October 2007, because of recurrent abdominal pain and other gastrointestinal complaints. All patients filled a questionnaire sheet with regard to their general health and were excluded if they had been previously treated for *H. pylori* infection and usage of non steroidal anti-inflammatory drugs (NSAIDs); also Patients with actively bleeding peptic ulcer disease were excluded, as this is a well recognized cause of a false-negative urease test

<sup>(13)</sup>. The study was approved by the ethics committee of the Hospital.

##### **Determination of *H. pylori***

Endoscopic examination was performed under local pharyngeal anesthesia, during which three biopsies were obtained from grossly inflamed areas of the antrum. One biopsy was used for Ultra Rapid Urease test (URUT) and slide impression smear, while the other biopsy specimens were fixed with 10% buffered formalinized saline, for preparation the paraffin embedded tissue blocks to histological evaluation and Immunohistochemical staining tests (IHC). In addition, blood samples were aspirated from each patient after the endoscopy.

A number of invasive URUT Test, slide impression smear) and non-invasive (anti-*H. pylori* IgG ELISA Test) diagnostic tests were used for the diagnosis of *H. pylori* infection according to<sup>(14)</sup>.

##### **Immunohistochemical Analysis of CD74**

Immunohistochemistry was performed using the labeled streptavidin-biotin (LSAB) immunostaining method and the four-micrometer-thick, formalin-fixed, paraffin embedded serial sections of all biopsies were de-paraffinized and Re-hydrated. For antigen retrieval, pretreatment was performed by microwave heating in Glyca solution (BioGenex's U.S. Cat. No HK167-5K) for 5 min. on high power (~700 watts). Peroxidase block then incubation of each one with Mouse anti-Human CD74 (mouse monoclonal antibody, C2430-01E, dilution 1: 4, USBiological) was conducted at 37 °C for 1 hour and followed by phosphate-buffered saline washing. Positive immunohistochemical reactions were revealed using DakoCytomation LSAB 2 System-HRP Code K0673 (DakoCytomation, USA), using