COMPYLOBACTER PYLORI, PEPTIC ULCER AND CIMETIDINE

I.SAFA KAYA*
UGUR DILMEN*
SERDAR DIKER*

An interesting association between the Campylobacter pylori and peptic ulcer disease has been claimed by many authors (1-5). On the other hand cimetidine which is being used widely for the treatment of peptic ulcer disease, has been shown no enhance T cell function (6). We investigated whether cimetidine has any antibacterial effect through enhancing the humoral immunity.

Cimetidine was diluted with brain-heart infusion broth (100 mg, 50 mg, 20 mg, 10 mg, 5 mg per ml) and one drop of solution containing a 10^{-4} dilution of Campylobacter pylori isolated from the gastric juice of a 14-year-old child with gastritis was added and cultured for 24 hours. It was observed that at examination at 4, 8 and 24 hours that bacteria had grown in each tube this result should naturally lead to the conclusion that cimetidine has no antibacterial effect on Campylobacter pylori ($p>0.05$).

Later we investigated the effect of cimetidine on phagocytic functions of the macrophages. Peritoneal macrophages were collected from mice by washing the peritoneal cavity with Ringer phosphate buffer (RPB). Macrophages were purified by Ficoll-paque gradient centrifugation (7). Bacteria and macrophages were mixed at a ratio 50: 1 in RPB containing 10 mg/ml cimetidine a 10% heat inactivated guinea-pig serum and incubated at 37°C for 30 minutes. Phagocytosis was then quantitatively evaluated on Giemsa stained specimens prepared by cytocentrifugation. At least 250 macrophages were scored for each sample. Statistical study revealed that there was no difference between the two groups ($p>0.05$).

	Macrophages with associated bacteria (%)	Number of bacteria per 100 macrophage
Cimetidine	6.0	12.0
Control	6.0	10.0

In summary both groups of experiments did not reveal any evidence in favor of cimetidine's antibacterial or phagocytosis promoting effects.

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* From Turkish Health and Therapy Foundation memorial, Ahmet Örs Hospitals, Department of Pediatrics, 06610, Emek, Ankara, Türkiye.