Mucosal Immunology Of Human Infectious Diseases.

Ibrahim M.S. Shnawa*

الخلاصة

تلعب الأسطح المخاطية دورا حيويا في الدفاعات المناعية حيال الأمراض المعدية وهذه الدفاعات لها صلة بالمناعية البدنية ببعض الآليات. وهذه الدراسة مراجعة تمثل الدراسة عشرة أعوام 1999-2009 . العدوى في السطح المخاطي تحقق استجابة جهازية ومخاطية. وعلى الاغلب تكون الاستجابة الجهازية اعلى من المخاطية. وكانت مناعة القطيع بين المرضى تحتوي على منخفضي ومتوسطي وعالي المناعة معطياً بذلك منحنى بياني بتوزع طبيعي.

Abstract

Mucosal surfaces play crucial role in immune defenses against human infection diseases. Such mucosal defenses are in a way or other related to systemic defenses mechanisms. A review of ten years works 1999-2009 is being presented. Mucosal infections induces, mucosal and systemic immune response. The systemic response mostly higher than mucosal . The patient herd immunity induces low, moderate and high immune patients, showing normal distribution curves.

I- Introduction

Mucosa allover the internal coverage of internal organs harbors a defense mechanisms of cells and mediators. These mechanisms are worked by the common mucosal immune system (1). COMIS is subdivided into an effecter sites and inductive sites. The inductive sites are well organized lymphoid tissues, while the effecter sites consist of loose lymphoid tissues. The relation of COMIS to the systemic immune system is site of three opinions, first COMIS is separated system, second the transduction theorem and the third they are related in some ways (2,3). The COMIS is including several compartments namely Bronchus associated BALT, Gut associated CA_2T, Nasal associated NALT and skin associated SALT (3) .The objective of the present work is to review 10 years works on the mucosal immunology of human infection diseases at Babylon province. Hilla city.

*Babylon University College of Science Dept. of Biology Hilla P.O. Box 4.

II- Investigative Approach

Mucosal materials from patients and controls were processed for separation of MIG in accordance with modified Johnston and Thorap (4,5) Mucosal Leukocyte were separated by dextran for nutrophil and macrophage and Ficoll for lymphocytes (6) peripheral blood leukocyte were separated by Dexlran for PMN and MN and Ficoll for lymphocytes (5). MBT, LIF, MIF, STA & PHA were done as in (7,8).

III- Phenomena

Prozone has been found in typhoid patients, serum antibody transadated fraction at mucosal surfaces in mammary, typhoid and urinary tract infections.

Low test noted among diabetic, aged and other immunocomporomized states. In mixed infections agents states; antigenic competition was noted. Antigen refinement may change the nature of the immune response.

IV- Mucosal infections stimulates mucosal versus, systemic, humeral and cellular immunity

These infections were including, Ecoli, P.aeruginosa, and S.aureus in immunopotents patients with high level immune response and low level in compromised patients.

V- Mucosal infections stimulates mucosal versus systemic humeral responses only;Such infections are including; K.pneumoniae P.mirablis and P.vulagris.

VI- Mucosal humeral herd population immunity:

Mucosal antibody titre has been used as an infections probe. Normal distribution curve was noted among patients with apparently low, medium and high responses, low and high, however competed to medium responses.

VII- Systemic and mucosal antibody the ratios different:

Titre ratios were noted among different infections but the most common were 20:1 ; 10:1 and 5:1.

VIII- Leukocyte inhibitory factor and mucosal herd immunity:

When LIF was used as a purpose typhoid infection in man. It was noted three fractions of population as low, medium and high responsive.

The graph shape as bell distribution both at mucosal and systemic compartment (Shnawa & AlAmmar -unpublished data)

IX- Mucosal cytokine level in burred skin;

Mucosal LIB in infected skin burn with klebsiella was lower than systemic while, the mucosal was higher than systemic in fecudomenal infected burn wound. The population showed low, medium and high concentration (Shnawa & Al-Gebori -unpublished data).

X- Panoramic view to specific infections:

24 persistent pyuria patients with Ecoli, klebsiella P.neumorias and S. aureus were probed by mucosal antibody titres (MAT) S.typhi specific MATs were scored in 49 entric fever patients.

The MAT specific for S.aureus, P.mriablilis and P.aeruginosa were noted at clinical levels in 30 COM patients. 43 mastitis patients showed MAT specific for S,aureus, P.aeruginosa and K.pneumoniae were noted in clinical levels (table1, fog 1). The scores for the clinical titres were ranging between 8-256.

XI- Panoramic view to exceptional immune states:

It has been noted that some infection with clinical infection and mucosal antibody had been separated but no agent could be isolated. Conversely, the proposed pathogen had been isolated but no specific MIG can be separated. These together with low mab, titres in high MIG concentration and high mab titres in low MIG concentrations.

XII- Concluding Remarks:

For the above mentioned presentation one can put forward the following concluding remarks:

- **i- mucosal antibody can be separated from several mucosal infections.**
- **ii- Mucosal antibody titre levels can be used as an infection probe.**
- **iii- Lower mucosal a b titre can be early in immune response, low responsive new and low immunosuppresion.**
- **iv- High mucosal a b titres is being are indicative for clinical infections.**

v- **Mucosal LIF is indicative for involved of cell mediated immunity to infection and can be helpful as cellular immunity level in patient population.**

vi- **Mucosal cytokines IL6 levels in skin were higher than those noted in systemic level. In Pseudomonal burn infection, conversely systemic was higher than mucosal in klebsiella burn infections.**

Table -1 :Panoramic view to specific mucosal infections:

Titre		Patients numbers			
X	Y1	Y2	Y3	Y4	Y5
	UTI (9)	Entritis (5)	COM (10)	Mastitis (11)*	Total
0	0	0	0	0	00
2	0	3	0	1	04
4	1	9	0	0	10
8	6	5	0	4	15
16	5	12	5	6	28
32	7	10	15	15	47
64	5	0	9	7	15
128	0	0	1	10	4
256	0	0	0	0	0

*** Reference numbers.**

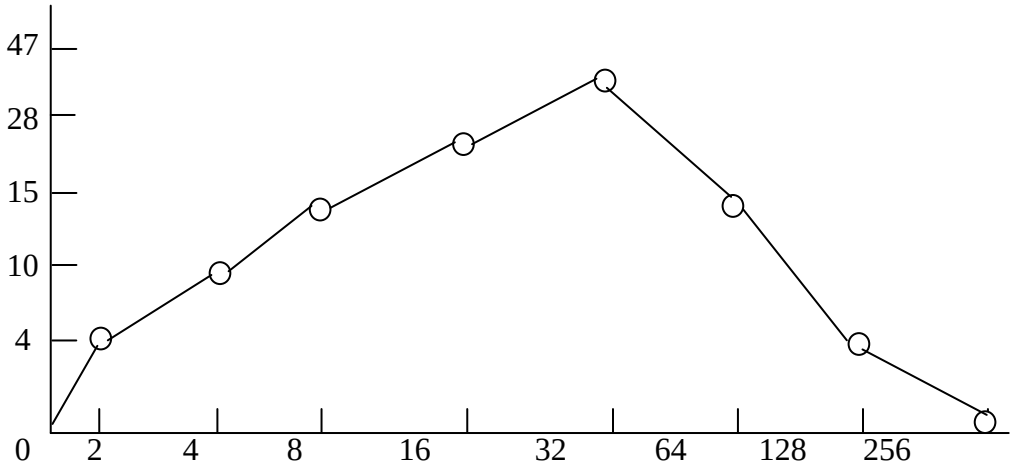

Figure-1: Mucosal humoral herd immunity of some human infections diseases at Babylon province.

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