

Secondary immunodeficiency (نقص المناعة المكتسبة أو الثانوية)

Immunodeficiency = impaired immune function

Primary immunodeficiency = genetic impairment of immune function

Secondary immunodeficiency = impairment of immune function as a result of factors not related directly to the immune system

So, if we treat the underlying cause, the immune function will improve.

When should we suspect that an immunodeficiency is present?

- A. Increased frequency of infection.
- B. Increased severity of infection.
- C. Infection by unusual or opportunistic pathogens (e.g., JC virus, *Mycobacterium avium* complex).
- D. Infection not responsive to treatment.

Causes of secondary immunodeficiency:

1. Malnutrition:

Protein malnutrition is the most common cause of secondary immunodeficiency worldwide.

Other forms of malnutrition that can result in immunodeficiency: Zinc deficiency, vitamin deficiency (vitamins A, C, D, and E).

2. Infections:

Examples include: HIV infection (من اسمه فيروس نقص المناعة المكتسبة), measles (transient immunodeficiency لفترة قصيرة). Bacteria and parasites can cause immunodeficiency.

3. Drugs:

- A. Anti-inflammatory agents (glucocorticoids (steroids))
- B. Immunosuppressive medications
- C. Chemotherapeutic agents

4. Metabolic and chronic conditions:

- A. Chronic renal disease
- B. Diabetes

5. Extremes of age (neonates and elderly individuals)

Investigation of immunodeficiency:

- A. Clinical history and physical examination
- B. Laboratory tests: complete blood count, differential white blood cell percentages, percentage of lymphocyte subsets, antibody levels in serum