Health and Medical Question

Name

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Infectious diseases refer to illnesses that result from various organisms like parasites, viruses, fungi, or bacteria (Mayo Clinic Staff, 2021). Typically, most of the organisms that reside in and on human bodies are usually not detrimental or even useful, even though some of them could instigate ailments beneath certain circumstances. Further, several communicable ailments are normally spread by insects, people or other animals, while others are acquired through ingesting unhygienic water or food or being subjected to entities in the surroundings. As such, this paper explains the role of the immune system in protecting human beings from contagious infections and immune syndromes.

Essentially, the immune system attacks microbes or their subsequent poisons through the aid of antibodies. In particular, this is achieved through their identification of antigens on the microbial exteriors, or in the compounds they generate, as foreign bodies. Subsequently, the antibodies then mark these antigens for demolition, via the B and T lymphocytes, also called memory cells. Hence, this infers that the cells can identify and damage previous microorganisms swiftly in case of their recurrence, prior to their replication and initiation of microbial infections (Better Health Channel, 2017).

To begin with, fungal infections, such as athlete’s foot, tend to be regularly more irritating than severe, although a few of them could lead to critical diseases illnesses including fungal histoplasmosis or blastomycosis. Largely, one of the most common methods of developing internal fungal infections is through breathing in fungal spores, and they regularly occur in decomposing plants or in the fecal matter of animals. Conversely, parasitic infections like malaria are usually communicated through parasites, either microbes or minor bacteria. Besides, nearly all parasitic infections are acquired through ingestion or contamination (Sepsis Alliance, 2021).

Unlike in non-immunocompromised persons, the materializations of nearly all parasitic infections are aggravated by genetic and attained origins of immunocompromised hosts, including those under immunosuppressant medicines or infections such as corticosteroids or HIV. Additionally, while non-immunocompromised individuals could acquire parasitic infections from animals, humans and the environment, critical parasitic toxicities in immunocompromised hosts frequently stem from the recurrence of a formerly attained illness, like toxoplasmosis, or from a major attained disease, which tends to be more severe due to the immune deficiency (BioMed Central Ltd, 2021).

In contrast to non-immunocompromised individuals, fungal infections are normally specifically dangerous to the persons whose immune systems are compromised, like those under immunosuppressive medicines for severe health disorders and those living with HIV/AIDS. As Puebla (2012) asserts, most fungi in the latter persons, including groups of fungi normally deemed harmless, tend to have higher chances of triggering severe illnesses and death, compared to the same manifestations in people whose immune structures are uncompromised. Ideally, the same analogy persists with infections caused by opportunistic fungal infections.

In light of the given illustrations, it is correct to say that infectious diseases are usually caused by a lot of pathogens, comprising parasites, viruses, fungi and bacteria, which are all capable of causing both mild and severe illnesses. Additionally, the role of antibodies in helping the immune system to fight against microbial infections cannot be overstated. Ultimately, it is also clear that both parasitic and fungal infections are normally greatly severe in non-immunocompromised persons compared to the immunocompromised ones.

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