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Infection and Malignancies

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Many infections due to microorganisms lead to profound effect on the immune system and also lead to development of malignancies by various mechanisms. Infections can lead to ongoing inflammation and persistent irritation. Bacteria like *Helicobacter pylori* lead to Gastric mucosal irritation and growth factor mediated metaplasia and neoplasia. Viruses like human Papilloma virus can lead to warts and Carcinoma of Cervix in females and CA penis in male. Cirrhosis of liver after chronic hepatitis caused by Hepatitis B virus leads to fibroblast stimulation and Carcinoma of liver in many cases. Epstein Barr virus is also implicated in Nasopharyngeal Carcinoma. Mostly carcinoma occurs after infection by DNA viruses and microbial genes can be detected in tumours. However even HIV, an RNA virus leads to CNS lymphoma. Kaposi's sarcoma can occur after secondary infection by KSHV in HIV infected persons. Importantly, malignancies after viral infections can be prevented by vaccines. HPV vaccine and HBC vaccine are there for that purpose. Even parasites like *Schistosoma* spp. lead to bladder irritation, metaplasia and bladder cancer. Same irritation and inflammation by *Clonorchis* spp and *Opisthorchis* spp. can produce bile duct irritation and cholangiocarcinoma. Even fungi like *Candida* spp. have been implicated in tumours of oral cavity. These aspects of mutual interactions of infection and malignancies need to be explored more. Therapy addressing these infectious agents may be a promising approach for preventing or treating malignancies in early stages.

Keywords: Infection, malignancy, interlink.

Biography:

MBBS from Calcutta Medical College, MD Microbiology from PGIMER Chandigarh. Second prize winner in oral category in STMIDI Tropicon 2018. Now working as Associate Professor, Microbiology in All India Institute of Hygiene and Public Health, Kolkata, India. Dr Sayan has 71 peer reviewed publications in various medical journals. He is the editorial board member of various journals and chief editor of Eastern journal of Medical Sciences.