Infectious diseases have an impact at basically three levels in dentistry. The first level is the health component of incidence and prevalence in the community. The second level is how dental care affects medically compromised patients. Finally, there is how infections or immunocompromised diseases impact dental healthcare workers. In this article, we shall try to address these three aspects in a simple and pragmatic way.

Common Infectious Disease Impacting the Community

It is well known that the different hepatitis-causing viruses, HIV, and AIDS, and tuberculosis (TB) including multidrug-resistant TB, are transmitted through the fecal-oral route. Contamination and improper and unhygienic handling and from contaminated water are the main sources. 

Hepatitis A and E virus infections are the most common infections in developing countries. Hepatitis A virus infection and tuberculosis are now common conditions that must be considered as important players. Other conditions such as herpetic infections, influenza and bacterial infections may have an impact on the clinicians providing care if they are infected.

Medical history should not be used in profiling patients with respect to universal standards. Knowledge of various infectious diseases known to humans affects the patient’s health and disease and may involve most organs in the body.

Hepatitis A (HAV) belongs to the picornoviridae family and is an RNA virus. Hepatitis A virus infection causes jaundice and rarely causes death.

Hepatitis A virus infection is now available in most countries. A one-time vaccination may provide lifelong immunity.

Hepatitis B viral (HBV) infection is caused by a DNA virus that is a hepatotropic virus. Patients with HBV infections cannot be clinically identified as being infected. About 2.7% of the population in Southern Asia, the Middle East, the Mediterranean, Eastern Europe, Russia and parts of Central and South America are infected with this virus. Certain regions in Asia, Africa, and South America have considered high in prevalence (> 8% of the population). Most of the regions in North America, parts of South America, Australia and Western Europe are considered low in prevalence (< 2% of the population).

The incubation period lasts from 45 to 160 days; therefore, it is also called “chronic hepatitis.” Transmission can be both percutaneous and non-percutaneous, but it is primarily bloodstream. This variety of hepatitis is very common and has been occupationally acquired by dentists in the past. Outcomes of HBV infection of any one of the infected become healthy again; about 9-10% become asymptomatic carriers or suffer from chronic, persistent hepatitis or develop active hepatitis leading to hepatocellular carcinoma and death; about 1% develop fulminating disease after infection and die.

Vaccines against HBV infections are available in most countries. The vaccination schedule among dentists (general practitioners and specialists included) range from 15% to 55%. Therefore, it is an uncommon disease affecting dentists. There have been cases reported of dentists not being infected with HBV. According to the Centers for Disease Control & Prevention (CDC), booster doses of the vaccine may not be necessary due to the anamnestic response and lack of evidence of previously immunized persons being re-infected (although the titers may be low after immunization, in the event of an exposure to HBV the body will develop a protective immune response).

Hepatitis C virus (HCV) or the parenterally transmitted non-A non-B virus is an RNA virus, usually seen in association with blood transfusions and contact with blood and other body fluids. This disease can be very debilitating and can be fatal. Over 60% of the infected may develop chronic liver disease or disease-related complications such as liver cirrhosis, liver failure, and cancers. Hepatitis C infection is the most common cause of cirrhosis of the liver.

In the event the dentist does not know what a clinician’s health component of incidence and prevalence, one must maintain a high level of professionalism and confidentiality in acquiring the patient’s trust and confidence. If the patient is not familiar with dental treatment, there is bound to be a barrier in doctor-patient communication such as information on treatment and surgical risk, and result being an incomplete history, possible misdiagnosis, and inappropriate treatment.

There are many classifications for AIDS such as the Centers for Disease Control’s Surveillance Definition, the Walter- Reed’s Classification, and the WHO Classification. In early stages, the HIV infection may not be noticeable and may be accompanied by symptoms such as weakness, arthritis or even be totally asymptomatic. The disease may be associated with a variety of other infections and is called AIDS or Acquired Immunodeficiency Syndrome.

In the United States, dentists can defer elective dental care until the patient is pronounced non-infected, and all emergency dental treatments may be provided in institutions that are equipped to deal with the control of cross contamination or occupational patsial exposure. Such facilities should include negative air pressure treatment rooms with the air vented to the outside of the building. The air conditioning and ventilation system must also be equipped with HEPA filters, and during contact with infected patients personnel must use masks that have a HEPA filter.

The Impact of Infectious Diseases on the Practice of Dentistry
different variety of infectious diseases that may be common locally (sickle-cell anemia, Gaucher’s disease, and cystic fibrosis). In the treatment of dental caries, the patient’s history was taken also may have a bearing on the time of occurrence and progression of disease.

Dental History

A) Generalized itching may be commonly seen as a sign of cirrhosis prior to an occurrence of jaundice. Because the skin vesicles and scarring could represent the various stages of the liver disease. However, the absence of pigmentation conditions associated with varying levels of immunosuppression such as Addison’s disease, von Recklinghausen’s disease, Peutz-Jeghers syndrome and Crohn’s disease and some nutritional/micronutrient deficiencies are also possible. Body hair (the lack or loss of it) may be associated with chronic illnesses, dermatomyositis, systemic lupus erythematosus, lymphoma, cachexia, Herpes zoster and micronutrient deficiencies.

B) In addition to the mucocutaneous and neurologic processes may be associated with joint disorder, and the patient’s history will elucidate routine of dental treatment so as to reduce the risk of infection. The patient’s history also includes chronic prosthetic implants and total joint replacement by administering anti-inflammatory prophylaxis, along with seeking a possible consultation from the patient’s physician.

c) Eyes Blurred vision may be associated with diabetes mellitus and can-cer may be more likely to fall sick due to the decreased immunity and sur- faces and exhibit a greater probability of recurrence than healthy persons.

Family History

Hereditary diseases and disorders such as hemophilia, sickle-cell anemia, it may be conditioned in a manner which affects the system may be elicited here (vertical transmission). The history may also be of importance (horizontal transmission, i.e., between spouses, patients, to healthcare provider and vice-versa).

Social History

Information on travel, sexual promiscuity, use of drugs and alcohol, personality and emotional state may also be reviewed here. The history was taken also may have a bearing on the time of occurrence and progression of disease.

History of Illness (Past & Present)

History of trauma or other medical condition that required hospitalization and invasive sur-gery requiring blood transfusion, blood dyscrasias, immunosuppres-sive therapy, chemotherapy and radiation therapy that may alter the immune system and the patient’s immune system must be recorded and dental treatment provided accordingly. Patients with chronic diseases such as diabetes mellitus and cancer may be more likely to fall sick due to the decreased immunity and surfaces and exhibit a greater probability of recurrence than healthy persons.

Review of Systems

a) Skin Generalized itching may be commonly seen as a sign of cirrhosis prior to an occurrence of jaundice. Because the skin vesicles and scarring could represent the various stages of the liver disease. However, the absence of pigmentation conditions associated with varying levels of immunosuppression such as Addison’s disease, von Recklinghausen’s disease, Peutz-Jeghers syndrome and Crohn’s disease and some nutritional/micronutrient deficiencies are also possible. Body hair (the lack or loss of it) may be associated with chronic illnesses, dermatomyositis, systemic lupus erythematosus, lymphoma, cachexia, Herpes zoster and micronutrient deficiencies.

b) Liver Generalized itching may be commonly seen as a sign of cirrhosis prior to an occurrence of jaundice. Because the skin vesicles and scarring could represent the various stages of the liver disease. However, the absence of pigmentation conditions associated with varying levels of immunosuppression such as Addison’s disease, von Recklinghausen’s disease, Peutz-Jeghers syndrome and Crohn’s disease and some nutritional/micronutrient deficiencies are also possible. Body hair (the lack or loss of it) may be associated with chronic illnesses, dermatomyositis, systemic lupus erythematosus, lymphoma, cachexia, Herpes zoster and micronutrient deficiencies.

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Condition

Restriction

Return to Work

Conjunctivitis

Yes

Until discharge ceases

Streptococcal pharyngitis (active)

Yes

Until 24 hours after starting effective treatment

Streptococcal pharyngitis (incubation period)

Yes

Until complete symptoms resolve

Typhoid fever (fever)

Yes

Until treated and deemed non-infectious

TB (ve + skin test only)

No

Evaluate for infectious status, treat if potentially infectious or as needed

Influenza

Yes

Until H1N1 is asymptomatic

Pediculosis (lice)

Yes

Until treated and has no lice

Hepatic whitish

Yes

Until lesions heal

Chickenpox

Yes

Until lesions dry and crust

Hepatitis B (HBe antigen)

No

Universal standard precautions, asptic techniques, and try to reduce local

HIV/AIDS

Yes

Expert panel, U/LSP, antiviral medications

Measles

Yes

Until 7 days after rash appears

Meningitis

Yes

Until 5 days after rash appears

Rubella

Yes

Until 5 days after start of effective antibiotic therapy

Perihepatic abdominal symptoms

Yes

Until symptoms resolve

Hepatitis A

Yes

Until 7 days from onset of jaundice

References


