Infectious diseases have an impact at basically three levels in dentistry. First, there are non-infectious, non-communicable conditions that limit 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 infectious 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

Hepatitis A virus (HAV) belongs to the picornaviridae family and is an RNA virus. HAV infection causes jaundice and rarely causes death. Among otherwise healthy adults the death rate is about 1 in 1,000, and in people over 50 years of age the rate is 27 in 1,000. The incubation period is about 2 to 6 weeks. Once a person recovers from hepatitis A infection, the person is protected for life. A vaccine against Hepatitis A viral infection is now available in most countries. It is not protective if one has not been exposed to HAV, a one-time vaccination may provide lifelong immunity.

Hepatitis E virus (HEV) infection is similar in nature to the HAV infection epidemiologically except for the higher rate of infections, especially in pregnant women and the third trimester (20% infection rate). Outbreaks are commonly seen in developing countries. Southeast Asia, Africa, Central and South American regions among other geographic regions in the world. As of today, there is no vaccine available against Hepatitis E virus.

Hepatitis B viral (HBV) infection is caused by a DNA virus that is a hepativirus. People 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 and Africa (the Tundra), South America, Africa and Southeast Asia including China are 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 days to 6 months. 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 contagious and has been occupationally acquired by dentists in the past. Outcomes of HBV infection and changes of the infected become healthy again; about 90-10% become asymptomatic carriers or suffer from chronic, persistent hepatitis or develop active hepatitis leading to hepatocellular carcinoma and death; about 1% develop fulminant disease after infection and die.

Vaccines against HBV infections are available in most countries. The vaccine is often given to dentists (general practitioners and specialists included) range from 15 to 35 years. There is no unusual disease affecting dentists. There have been cases of patients with HBV infection, according to the Centers for Disease Control & Prevention (CDC), booster doses of the vaccine may not be necessary 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 have 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, 10% may develop liver disease, 5-40% develop active liver disease and 5-20% cirrhosis of the liver.

HCV infection and hepatocellular carcinoma are found to be epidemiologically associated. Although a vaccine is not available, various treatments against this infection—including chemotherapeutic agents—can control the disease and reduce viral load. This virus is highly infectious; therefore, healthcare providers must take adequate precautions while treating patients.

Hepatitis D viruses are a virus-like particle that is always dependent on the presence of a Hepatitis B viral infection in the patient (piggy-back virus). It may occur as an infection of the HBV carrier being infected by HBV. Mode of transmission is similar to blood and other body fluid contact.

Hepatitis C viral infection is the most insidious and difficult to identify. It is a bloodborne condition.

In short, hepatitis viral infections are the most insidious in infections that occur among susceptible patients. Dentists must avoid contact with blood and other body fluid, instruments, etc. Dental care facilities and barrier techniques and adopting safe practices for the disposal of contaminated blood and other body fluids.

Human immunodeficiency virus (HIV) is a condition where transmission occurs through contact with blood and other body fluids. This disease was identified in June 1981 and has been the plague in the world. About 20% of people are infected in 57 countries, including 1 in 35 in South Asia, 1 in 100 in North America, and with a new type of a multidrug-resistant strain. Mycobacterium tuberculosis is the most common cause of disease affecting the lungs and may involve most organs in the body.

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Each year about 8 million people develop TB and 5 million die. TB mimics many respiratory conditions, therefore when the patient observes a cough of more than 3 weeks of duration and spum possibly tinged with blood, the patient should be referred for a TB skin test and, if diagnosed with active infection, treatment may be prescribed. Mycobacterium avium complex is an organism that commonly affects the lungs, but may involve most organs in the body.

Medical History & Impact of Infectious Diseases on the Practice of Dentistry

The impact of infectious diseases on the practice of dentistry requires that the clinician should not discriminate against an infectious disease patient with reference to the potential of spreading the disease in the clinic. The reason one should look out for patients with infectious diseases is to protect them from acquiring other infectious diseases as they these individuals are usually medically compromised. For some patients with active infectious diseases, it may be advisable to defer routine dental care (as in tuberculosis) until the patient is deemed non-infectious. Sometimes it may be necessary to differentiate between patients at risk for infections, such as patients with a history of rheumatic heart disease, where the clinician should recommend that antibiotic prophylaxis is necessary.

In all, all must know where the patient stands in the panoply of infectious disease risk and the potential for offering treatment or even advice. Knowledge of various infectious diseases and their potential for transmission, clinical features, progres- sion and outcomes is essential for a clinician. While speaking to patients with infectious diseases one must maintain a high level of professionalism and confidentiality in acquiring the patient’s trust and confidence. If the patient is not medically compromised, there is bound to be a barrier in doctor-patient communication such as information gathering and seeking advice and result being an incomplete history, possible misdiagnosis, and inappropriate treatment.

A legal issue that may be associated with the patient’s medical history is the completeness of the medical/dental record in the event of malpractice litigation. In the event the dentist does not participate in formal education or seek continuing education, this information may be construed as negligence during litigation and may affect one’s right to practice dentistry. Therefore, not only must the dentist possess the clinical knowledge and seek advice end result being an incomplete history, possible misdiagnosis, and inappropriate treatment.

Some Components of the Patient Assessment Record in Relation to Infectious Diseases

Identification Characteristics

Date of visit, name, age, gender, ethnic, marital status, educational level, dress, and occupation are some of the variables that are needed. Information that may be stored on the infectious disease status of the patient. For example, military personnel may be exposed to a
Review of Systems

a) Review of Systems

1. Review of Systems

Patients, patient to healthcare transmission, ie, between spouses, different variety of infectious diseases and disorders such as diabetes mellitus and cancer may be more likely to fall sick due to compromised immune systems and exhibit a greater probability of recurrence than healthy persons.

2. Review of Systems

Family History

Hereditary diseases and disorders such as hemophilia, cystic fibrosis, and Down’s syndrome may be transmitted. Conditions affecting the nervous system may be elicited here (vertical transmission from mother to offspring). Certain diseases acquired through proximity and repeated exposure to infected persons are also of importance (horizontal transmission, ie, between spouses, patients to healthcare provider and vice-versa).

3. Review of Systems

Social History

Information on travel, sexual promiscuity, use of drugs and alcohol, personality and emotional state may also determine the level of risk of acquiring infectious diseases and possible immunosuppression as sequel.

4. Review of Systems

Review of Systems

a) Skin Generalized itching could be commonly seen as a sign of cirrhosis prior to an occurrence of jaundice. Adolescents with acne may present with vesicles and scarring which could represent the various stages of acne. When asked about medication and a past history of pigmentations associated with varying levels of immunosuppression such as Addison’s disease, von Recklinghausen’s disease, Peutz-Jeghers syndrome and Cowden’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) Review of Systems

Diabetes

Diabetes is a disease or condition characterized by hyperglycemia. It is likely to be immuno-compromised, infective endocarditis or other renal complications.

5. Review of Systems

Review of Systems

Eyes

Sclera. Herpes keratitis, the common cold, viral infections, conjunctivitis, chicken pox, gonorrhoea and chlamydia infections that affect renal function and may also affect the function of the genitourinary system.

f) Respiratory Infections

Chronic bronchitis, pulmonary tuberculosis. If adequate antibiotic coverage is not provided when needed, patients may end up with infectious endocarditis or other renal complications.

Apart from the above mentioned conditions listed in Table 1, patients with diabetes mellitus and associated with varying levels of immunosuppression such as Addison’s disease, von Recklinghausen’s disease, Peutz-Jeghers syndrome and Cowden’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. In市委, the patient’s primary care physician.

6. Review of Systems

GI Tract Signs of jaundice could be related to hepatitis, cirrhosis, and hepaticellular carcinoma as sequelae to viral infections of the liver. Other than Hepatitis A, B, C, D and G, Epstein-Barr virus, Cytomegalovirus, Rubella, Rubella, Cocksackie B virus, herpes viruses and adenoviruses may also be associated with inflammation of the liver, Inflamma- tion and fibrosis of the liver will precipitate the patient to other infections due to immunosuppression. Patients with prolonged use of medica- tions that affect renal function are also at risk of suffering from immunosuppression. Sev-

drome. Some signs of he- molytic/obstructive jaundice, chronic hepatitis and cirrhosis may be associated with icteric sclera. Hepatitis, in terms of viral transmission, general infections, gonococcal infections and chlamydia infections could be associated with signs of conjuncti-
vitae.

e) Ear, Nose & Throat (ENT)

Hematopoitic Abnormalities

Hematopoitic abnormalities, anemia, HIV infections and viral venereal diseases (STDs) may also affect the function of the genitourinary system.

i) Endocrine System

Diabetes mellitus and associated with varying levels of immunosuppression such as Addison’s disease, von Recklinghausen’s disease, Peutz-Jeghers syndrome and Cowden’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. In市委, the patient’s primary care physician.

Table 1: Suggested Work Restrictions for Dental Health Care Workers

<table>
<thead>
<tr>
<th>Condition</th>
<th>Restriction</th>
<th>Return to Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conjunctivitis</td>
<td>Yes</td>
<td>Until discharge ceases</td>
</tr>
<tr>
<td>Shingles (Varicella zoster virus)</td>
<td>Yes</td>
<td>Until lesions have healed</td>
</tr>
<tr>
<td>Scarlet Fever (S. aureus group A)</td>
<td>Yes</td>
<td>Until 24 hours after starting effective treatment</td>
</tr>
<tr>
<td>Varicella zoster infections</td>
<td>Yes</td>
<td>Until effective symptomatic resolution</td>
</tr>
<tr>
<td>TB (active)</td>
<td>Yes</td>
<td>Until treated and deemed non-infectious</td>
</tr>
<tr>
<td>TB (ve skin test only)</td>
<td>No</td>
<td>Evaluate for infectious status, treat if potentially infectious or as needed</td>
</tr>
<tr>
<td>Influenza</td>
<td>Yes</td>
<td>Until H1N1 is asymptomatic</td>
</tr>
<tr>
<td>Pediculosis (lice)</td>
<td>Yes</td>
<td>Until treated and has no lice</td>
</tr>
<tr>
<td>Herpetic whitlow</td>
<td>Yes</td>
<td>Until lesions heal (need to be on regular anti-viral medication)</td>
</tr>
<tr>
<td>Varicella (Chicken Pox)</td>
<td>Yes</td>
<td>Until lesions dry and crust</td>
</tr>
<tr>
<td>Shingles (Herpes Zoster)</td>
<td>Yes</td>
<td>Until lesions dry and crust</td>
</tr>
<tr>
<td>Hepatitis B (H BV antigens)</td>
<td>Yes</td>
<td>Until lesions heal (need to be on regular anti-viral medication)</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>Yes</td>
<td>Expert panel, LP/SP, antiviral medications</td>
</tr>
<tr>
<td>Measles</td>
<td>Yes</td>
<td>Until 7 days after rash appears</td>
</tr>
<tr>
<td>Mumps</td>
<td>Yes</td>
<td>Until 5 days after rash appears</td>
</tr>
<tr>
<td>Rubella</td>
<td>Yes</td>
<td>Until 5 days after rash appears</td>
</tr>
<tr>
<td>Perinatia</td>
<td>Yes</td>
<td>Until 5 days after start of effective antibiotic therapy</td>
</tr>
<tr>
<td>Diabetes</td>
<td>Yes</td>
<td>Until symptoms resolve</td>
</tr>
<tr>
<td>Diabetes</td>
<td>Yes</td>
<td>Until 7 days from onset of jaundice</td>
</tr>
</tbody>
</table>

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mCME gives you the oppor-
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